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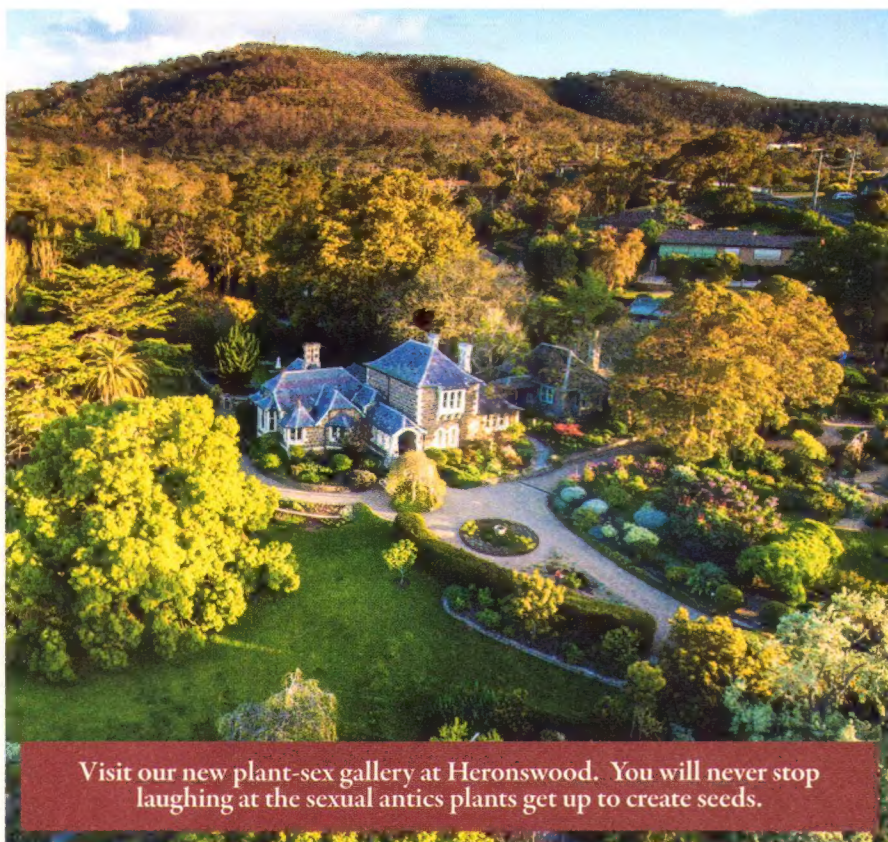
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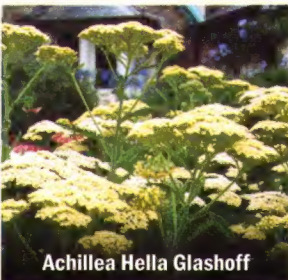
Arial view of Heronswood, Dromana ►



Pink Evening Primrose



Delphinium Blue Sensation



Achillea Hella Glashoff



Agastache Blue Fortune

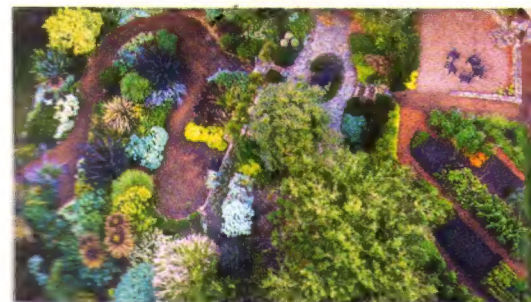
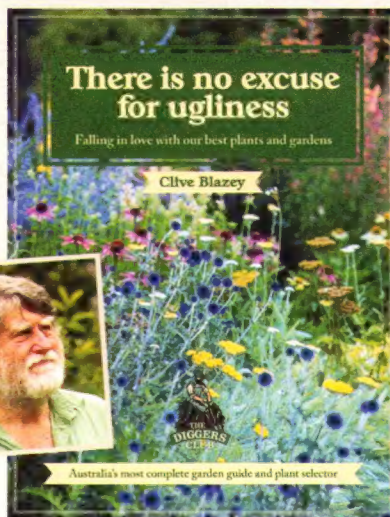


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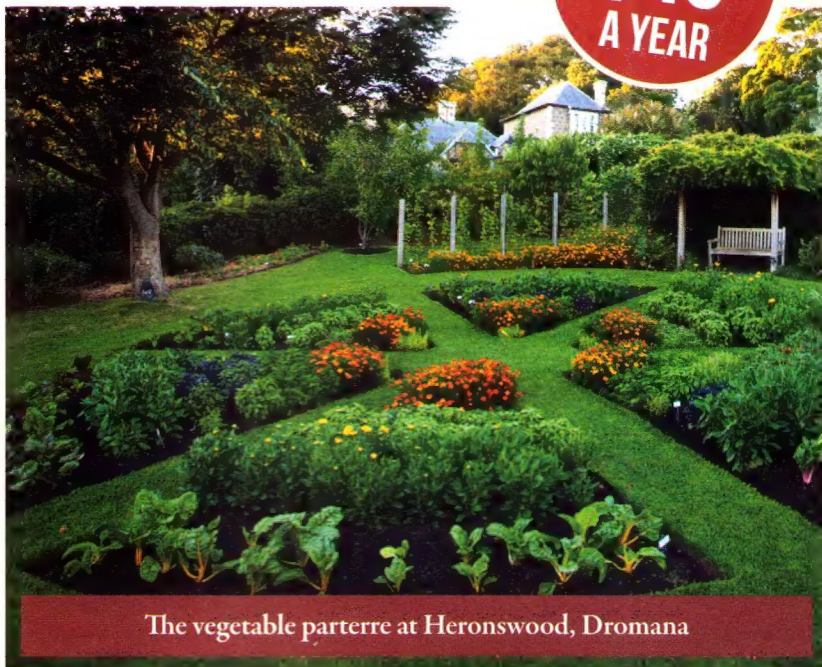
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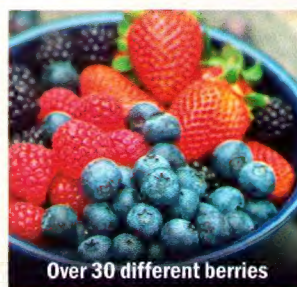
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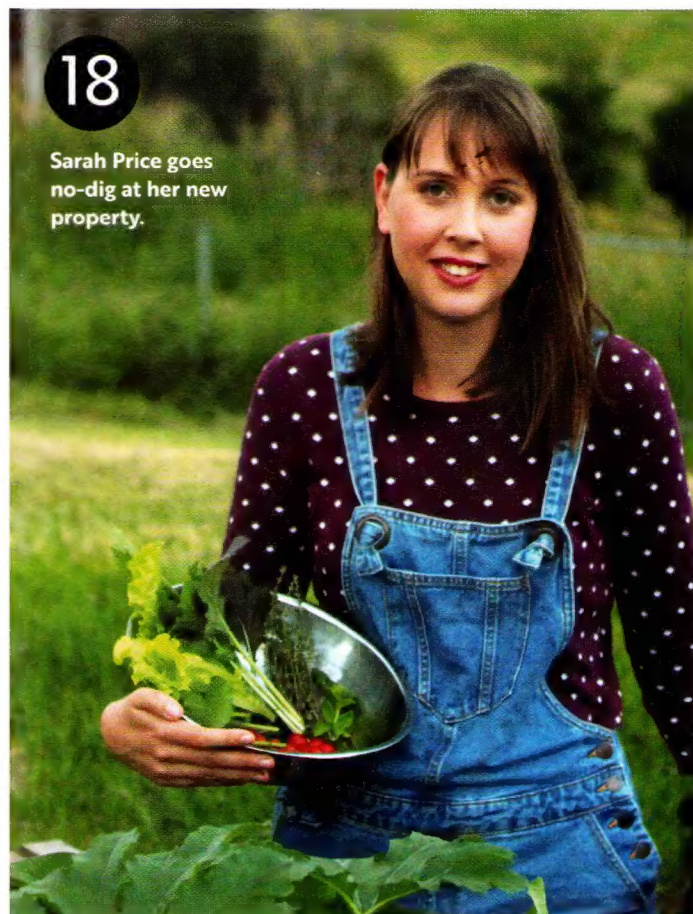
FRONT COVER: A tiny house builder with a social housing motivation — tinyhouse2go is an innovative company interviewed by long-time EG writer, Bob Rich. See page 46 for more. Photo by Matthew Cairns.

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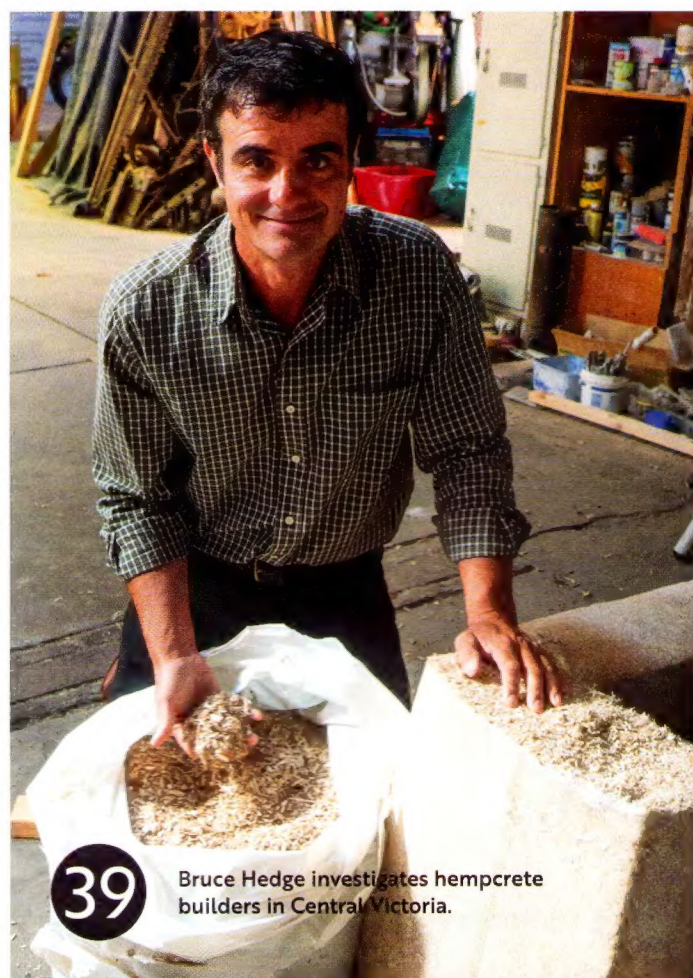


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Bruce Hedge investigates hempcrete
builders in Central Victoria.

Dear readers,

Welcome to the winter issue of *Earth Garden*. Many readers had such a warm Autumn that Winter is probably a relief. A chance to slip into something more comfortable: some gumboots (but make sure you read what Jackie has to say on page 36).

And maybe light the fire for the first time since last Spring. I think the award for grooviest footwear might go to Rachel Altenbacher this issue though — check out her Ugg boots on page 12.

At our place, our clobber doesn't vary much from season to season. But as I write this we're at one of the year's most exciting seasonal phases: we have a shade house full of early vegie seedlings ready to be planted out.

It's peak Dry Season vegie time for us right now in Broome. So we're just about



Vladimir and the girls are always keen to help with garden bed prep, but are less impressed once confined to their run while our seedlings are small.

to build our annual bamboo tomato frame, and gently poke seedlings into beds Judith has been nurturing for up to six months with judicious additions of chook manure, compost, and various mulches.

Our chooks don't like this season much. It's time for them to be confined to their (large) runs instead of having the entire garden to turn over. We don't want our fresh seedlings turned over, so we'll wait till they're big enough to resist Vladimir's Transylvanian feet and claws, or the incessant pecking at sumptuous green leaves that the hens take on as their life's mission.

By chance there are three recurring themes in this issue: Hempcrete, Ugg boots, and trench composting. I hope you enjoy uncovering the places where these themes recur. And I hope you enjoy any of those sensual pleasures that winter brings to your garden, farm, building project, or kitchen.

Happy reading,

Alan

- Swing by our website, www.earthgarden.com.au after 1 June to watch a short video welcome from us to the Winter issue.

Email your letters, messages and snaps to editorial@earthgarden.com.au or post to PO Box 1318 Broome, WA, 6725.

FROM THE EARTH GARDENERS' FACEBOOK GROUP ...

UPCYCLE IT

We rescued a large rusty water tank from a neighbour in town and turned it into our outdoor barbecue gazebo. Still working on it with a few more things to add, but we love it. The red gum benches were cut on the property by my husband's dad 30 years ago, so my husband planed them and added legs. JoAnne Bouzianis-Sellick.

CAMELS IN THE OUTBACK

Greetings,

My name is Barry Watts I work as a remote area nurse near Alice Springs, in the Northern Territory. I have been dreaming of a wonderful adventure for most of my life. Many years ago whilst travelling to work I passed a lonesome camel at the Wilton Parachute Centre and was intrigued by the majesty of the animal. Many years later while living in Taree NSW I visited the camels on the beach at Port Macquarie. I went very close to buying my first camel (my wife's common sense prevailed) and it was another 20 years before I purchased Kezika our first camel.

Denise and I moved to Hermannsburg, a community west of Alice Springs in the West MacDonnell Ranges. On arrival I noticed an old wagon near the local council depot. Each night I would walk the dogs and on returning would stop and sit up on the wagon and pray, dream, imagine driving along with my camels. Eventually I purchased the wagon and thus the journey began. During one of my weekly trips to the small community of Wallace Rock Hole I came upon the local cattlemen busy rounding up



cattle and horses. In the yard was a lone camel: Kezika. I was so excited I stopped and after some bargaining purchased our first camel. I had no idea what I was doing but quickly searched the internet and began learning.

I made contact with a few cameleers who have been very generous

with their time and advice. Slowly I have remodelled the wagon (twice) and gradually learned to work with Kezika. After some months I was able to transport Kezika to a small yard back at Hermannsburg.

Over the past few years the dream has been evolving and we plan to walk and ride the wagon from Hermannsburg home to Taree. The journey will take up to six months and we will need eight to ten camels (we currently have five).

A lot has happened in the last few years and we hope to be able to share the journey with many people joining us for parts of the trip. Any suggestions will be gratefully received as we look to begin our travels in late autumn 2019. We have a number of locals interested in travelling with us and hope we can take some older kids and teenagers along. We also are looking at raising some money for World Vision as a part of the journey. Thanks to the folk that have already been a part of this journey.

Barry and Denise Watts, Trainee Cameleers.

HIDING THE STASH

Oh yeah found the eggs . . . under some timber. Not sure if I should eat them. Sevgi TC, near Melbourne.



Stick them in a bowl of water. If they float get rid of them. If they stand on their end, eat them first. If they just lie on their side, then all good.

Parrish Hague.

The float test, I found, is not 100 per cent reliable. It takes only one bad egg to ruin the other eggs you've cracked into a bowl. Me mum taught me this when we had chickens.

Martin Povey

Always crack into a separate bowl before adding to the main bowl.

Tammi Hubert.

I agree Tammi.

Martin Povey.

WORK PLEASURE

Sheer joy. Garlic in the early morning sun (*right*). The bonus is that it's growing in the front yard in view of my computer desk . . . months of pleasure to come.

Beverley Veals

Nice early morning sun on skin.

Danielle Jones, Earth Gardeners Facebook Group Admin.

I planted 150+ cloves only a week ago, and I reckon they have all come up.

Karen Charlton.

SWEET, SWEET POTATOES

My second harvest of sweet potatoes! I never thought they grew this big. Eight normal-sized ones, and this beauty over 3 kg!

Sharon Rich, Sherlock, SA.

We're harvesting too. It's very exciting because you never know quite what you're going to get. I'll dig them out over the next few weeks, do up the soil



a bit and leave roots and pieces of vine in the soil. They will grow another harvest.

Linda P Heenan

Congrats on a nice harvest. The big ones don't usually make it to the shop, as they sell poorly when compared to the medium ones. In reality sweet potato



A yummy winter
treat: baked sweet
potato fries.



growers often get big ones depending on how long you have left them in the ground and the health of the plant. We love them.

Tara Cox.

Me too — the size and shape don't usually change the taste! I'll make a whole lotta things: wedges, soup, mash and chips.

Sharon Rich

Gluten free pizza base. A key ingredient!

Viscount Kit Kelen

Fab idea . . . I do sweet potato bakes and hash browns!

Sharon Rich



HAPPY TOMATO PICKING

This is Alia Rose in the garden, snapped by her dad, Danny Bonnici.

EARTH MAIL is an open forum. The views expressed in letters from readers do not necessarily reflect the opinions of *Earth Garden*. Letters are always welcome, but please keep them concise. Good quality photos are also welcome.

EG IS EVERYWHERE! You can link up with other Earth Gardeners on Facebook, Instagram, Vimeo and the Earth Gardeners community group on Facebook. Go to earthgarden.com.au for all the social media links.

LANEWAY FOOD IS FREE

Lou Ridsdale has turned her hobby of gardening and self-sufficiency into a not-for-profit: Food Is Free. This new aspect of her life began in 2014, when Ridsdale began putting the surplus vegetables she'd grown on display in the laneway adjoining her rental property, so passersby could take what they needed. Very soon, her modest Ballarat initiative gained traction, thanks in part to her publicity nous and enthusiastic signage, but also through word of mouth. Other people dropped off their produce and the volunteers started trickling in.

The initiative is part of a global movement. The US version of Food is Free started in Austin, Texas, in 2012, through community gardens in public spaces. Within two years, the idea had spread to 200 cities around the world, over 26 countries.

"Nine months into us setting up in Ballarat there were at least 50 that had popped up around the country, but around winter they started shutting down because it becomes trickier," Ridsdale says. "You have to have that perfect storm of luring people to the site, but also getting them to participate. It doesn't have to be a regular thing," she says. "You could even leave a box of apples at a bus shelter."

"Ballarat has generational poverty and pressure in low socio-economic areas. Food can be really political. I'm living in a town where only 6.4 per cent of the population have the daily dietary intake of vegetables per day. That's not good enough as far as I'm concerned."

Gardening and the Ballarat Food is Free initiative have also brought redemption of a personal nature. "In Melbourne I was pickling in my own juices," she laughs. "I was living the



The Food is Free movement is flourishing in Ballarat.

most debauched, disgusting lifestyle, not looking after myself, living in a one-bedroom apartment, drinking way too much and very stressed."

She moved to Ballarat and carried on gardening. With home owners in the area increasingly subdividing their properties, garden areas are becoming non-existent. "With the help of a councillor Belinda Coates, I've persuaded council to allow people to have vegie boxes on their front lawns," Ridsdale says. "Council wanted to charge them \$150 each for a permit, but we renegotiated that it would be more preferable to have it as \$15, or \$5 concession. You shouldn't put hurdles in front of people if they want to gain a bit of space for themselves."

As of March 2018, there's a second Food is Free site in Ballarat, called Green Space. It's aimed at serving at-risk or marginalised community groups, to grow

food together. There's also a recycling centre for locals to drop off egg cartons, egg shells, paper bags, coffee grinds, newspapers and other organic waste, to be broken down into soil. More than 40 volunteers are now enlisted to care for the two sites.

Having worked on countless music tours, these days Ridsdale does her own tour of schools, which she has called – with a cheeky nod to The Ramones – Hey Hoe, Let's Grow. And while, as she notes, you have to ask people eight times on average to get something done when you work for a not-for-profit, in general she marvels at how trouble-free her journey has been.

"We've never had an incident," she says. "We have a saying in the laneway that nobody is judged on what they bring or take as long as they leave with a smile. I've met so many more people than I would have met before, and

Any news items of interest to Earth Gardeners may be submitted to **ON THE VINE**. Please send notice of meetings, festivals and gatherings well in advance of the events, by email to: editorial@earthgarden.com.au

that doesn't happen often in modern society. Usually it's hard to strike up a conversation with a stranger, but the laneway has become a bit of a confessional box; I've often had tears in my eyes."

That sense of community has flourished in even the most unlikely locals, as Ridsdale discovered when leaving her house one morning. "I could see a trail of spray paint from someone who had been tagging the street," she remembers. "They graffitied the roller door of my carport, but they didn't touch the laneway at all – they just passed it and carried on with the next fence. I love that there's that strange kind of respect."

—*The Guardian*

PLASTIC BAG BANS: HERE'S THE LOWDOWN

From 1 July, Queensland and Western Australia will ban single-use, lightweight plastic bags from major retailers, bringing the States into line with the ACT, South Australia and Tasmania. Victoria is set to follow, having announced plans in October 2017 to phase out most lightweight plastic bags this year, leaving only New South Wales without a proposed ban. Supermarkets have followed suit. So, what do plastic bans actually mean and are they truly better for the environment?

The ban on plastic bags only relates to single-use plastics thinner than 35 microns or 0.035 millimetres (human hair ranges from about 60 to 120 microns). These are typically known as high-density polyethylene bags or HDPE bags. Woolworths currently gives out more than 3.2 billion single-use HDPE plastic bags every year, and according to a 2009 study, about 1 per cent of those, or 30 to 40 million, find their way into the environment.

But thicker, more durable plastic bags will still be available to purchase in most supermarkets. So is this any

better for the environment? The short answer is, it depends. If consumers continue to use heavy-duty plastic bags at the same rate as lightweight bags, it can actually be worse. A UK Government life-cycle analysis of single-use versus reusable bags reported that heavy-duty plastic bags (low-density polyethylene or LDPE bags) need to be reused at least four times to make up for the increased greenhouse gas emissions caused by their production, when compared to single-use HDPE bags. And heavy-duty plastics may also take longer to break down in the environment, though both will eventually end up as harmful microplastics if they enter the ocean.

Professor Sami Kara from the University of New South Wales said introducing heavy-duty reusable bags is a short-term solution at best. "I think it's a better solution but the question is, is it good enough? To me it's not good enough. It's better in the long term that we don't use plastic bags at all."

Concerns that heavy-duty plastic bags are being discarded after a single use prompted ACT Climate Minister, Shane Rattenbury, to order a review of the scheme in the ACT earlier this year, citing "perverse" environmental outcomes. Still, Keep Australia Beautiful's national report for 2016–17 found a drop in plastic bag litter after plastic bag bans came into effect, particularly in Tasmania and the ACT. And a review of the ACT's bag ban in 2014 found annual plastic bag waste had dropped from 266 tonnes to 171 tonnes after it was implemented. But these short-term gains may be wiped out by population growth, meaning we'll end up with more people consuming more energy-intensive bags in the near future, Dr Kara warned.

"When you look at the population increase predicted by the UN by 2050, we're talking about 11 billion people

in the world," he said. "We are talking about 4 billion extra people, and if they all use the heavier plastic bags, they'll eventually end up in landfill."

The other issue is that shoppers may become accustomed to buying plastic bags, rather than changing their behaviour long term. Ireland reported a 90 per cent reduction in single-use bags after introducing a 22c levy in 2002. In 2007, the price was bumped up to 32c after people returned to their old habits.

Homemade, or even green bags are a much more sustainable option than single-use plastics. There are different energy costs for all bag materials, but the best way to reduce the impact of our bags is to reuse them. Cotton bags are water and energy-intensive to produce. Estimates suggest they need to be used around 130 times to achieve a reduction in greenhouse gases. But they are generally able to hold more items and can be used repeatedly. And they biodegrade, rather than breaking down into harmful pollutants.

Dr Kara said reusable bags made from materials like cotton are the only real solution. "That's the way we used to do it. I remember my grandmother, she used to make her bags from leftover fabric," he said. "Instead of wasting old fabric she'd give it a second life. That's the mindset we need to be shifting to."

A Zero Waste report prepared for the South Australian Government in 2007 found that reusable, polypropylene green bags — the sturdy shopping bags sold at most supermarkets — achieved the greatest environmental benefits when used multiple times compared to alternatives like paper or calico bags. They estimated that if every Australian household switched to green bags, 2,200 garbage trucks would be diverted from landfill, 1,100 tonnes of greenhouse gas emissions avoided, and 50,000 plastic bags recycled.

—ABC



QUIRKY TIN SHED BOOKSHOP 'BORN OUT OF LAZINESS'

Imagine pitching a business model to a bank manager for a bookshop that's open 24 hours a day, with no security and payment being optional. It defies logic and common sense, but it works.

Logical Unsanity Books and Miscellaneous Phantasmagoria is little more than a tin shed wedged between a group of shops in leafy Bardon, in Brisbane's western suburbs. It is not your average bookshop — it is not entirely weather proof, the shelving is made of old styrofoam vegetable boxes, discarded government bookshelves and even an old safe, with a mishmash of second-hand furniture.

But do not be deceived by shabby appearances. The book collection is carefully curated and catalogued and is in demand by booklovers across Brisbane. There are no staff and while the books are priced, that is a relative measure — people pay what they can afford or even not at all.

Bookshop owner Yarran L Jenkins, 30, is also not your average book seller. He has had the shop for three years and said it was the natural progression of his childhood efforts at retail.

"We had an avocado stall when we were kids up on Tamborine Mountain,

so I had personal experience with the concept of just leaving things and people putting money in the box," Mr Jenkins said. Mr Jenkins admitted it was an unusual concept, but one born out of laziness.

"I didn't want to have to open and close the shop all the time — I guess it was a natural progression of laziness to just leave it open all the time," he said.

"People like that they can come and there is not necessarily someone here," he said. "No-one is going to ask them if they want anything and they can buy whatever books they want because no-one is going to judge them on the book. "They can also come at anytime, so if they do shift work, they can come by. We get a lot of bus drivers and cabbies come through, and they love it."

Surprisingly, there is very little theft from the shop that is largely unattended and Mr Jenkins is philosophical about those who do not pay.

"There are people who just take books, but that's okay," he said.

"I have to be OK with that — it's like swings and roundabouts because others will pay for more than they take." Mr Jenkins said some people who came to the shop were also looking for more than just books.

"We have a guestbook and we get

people who write in the book," he said. "There are numerous notes from people late at night out walking, they're suicidal or really depressed or really anxious, and they've written really lovely notes about how it's helped them." One note read: "It's 11pm and I'm not doing well mentally so I took a drive and found myself here surrounded by a bounty of beautiful booty. Coming here has put me in such a better state of mind. It has brought a smile to my face. Logical Unsanity, this is the best idea having a 24-hour bookshop. You have saved a life this night and for that I will be forever in your debt. I love you Logical Insanity. Thank you - The Attic of My Mind xoxo "

Mr Jenkins said he never found out what happened to The Attic of My Mind but he hoped the bookshop provided a sanctuary for someone in need.

"It made me feel sad but also gave me that warm fuzzy feeling that I helped someone," he said. "I have no idea who they are or what happened to them but that sort of feedback has definitely been a driver to keep the shop going. People can come here and retreat from the world — if they can't sleep, or they are in trouble they can come here, they know that it's here — that's really nice."

—ABC



the garden of plenty PROVIDES

This issue our columnist **Rachel Altenbacher**, from the mid-north coast of NSW, survives a month eating solely from her garden — thanks to hard work, intricate preparation, and her trademark flair for divine food preparation.

WHEN it's cold outside on this little hobby farm I like to fill my mudbrick homestead with aromas and warmth by baking pastries and simmering stews. The newly-constructed rabbit- and bird-proof garden was growing an amazing amount of food so I challenged myself to live out of a compact 7.5m x 2.5m vegie patch for a month... with only a handful of store-bought products, fruit and nuts from my orchard, a stockpile of preserves and swapped items.

Here's how it went...

One of my colleagues heard about the trial and gifted me Ukrainian cucumber seeds and recipes his family

brought over when they migrated to Australia decades ago. I was intrigued by how he had kept the tradition of growing and pickling these cucumbers going all these years. During the war my great-grandmother was given the highest honour of trust with jewellery from her village to barter with farmers for food. To be seen as a person with integrity in times of hardship showed she valued all lives, not just her own.

A family who live in town were looking for a home for their noisy Araucana rooster and offered me a hen to go with him. They were sad to see them go but happy to receive a bag of the surplus beetroots I had grown.

Elvis the rooster with the powerhouse voice can crow as loudly as he likes and Priscilla his lady lays incredible blue/green eggs which have now completed my rainbow poultry basket.

THE RESOURCES

I have gathered kindling and had firewood chopped for years without calculating the timber required if electricity, solar, gas, fuel or batteries became unavailable, so this experiment helped me calculate quantities of daily supplies. I purchased a tub of local honey, lentils, 10kg of rice and 5kg of flour, 2 litres each of olive and macadamia oils, salt and pepper. Jars of



*"This journey has
evolved from a
desire for a more
wholesome existence
to a complete inner
transformation."*

Using fallen branches for firewood is a great way to utilise natural resources.

White cucumbers
pickled with dill in
peppercorn and malt
vinegar tasted divine
with salads.

quince jelly, Jaboticaba cordial, peach syrup and mulberry jam filled the pantry.

I cultivated a sourdough starter and brewed pear cider vinegar, juiced oranges and turned shredded cabbage into sauerkraut by pressing it into mason jars between layers of sprinkled salt. I fermented kale stems with onions in brown sugar pickling mix and rolled and hand cut pasta. Cooked up half a dozen bottles of pasta sauce, prepared tomato/apple/date chutney, pickled bantam eggs in cinnamon beetroot liquid, and I preserved white cucumbers in honey and malt vinegar with dill and peppercorns.

The repurposed spa tub held an abundance of potatoes and the pumpkin and spaghetti squash vines formed an intricate greenhouse effect. Next I collected and stored onions, garlic, corn, sorghum, chick peas, soy and black beans. Lemon verbena leaves in boiling water substituted herbal tea and I used dried stevia leaves for a sweetener since over 20kg of sugar beets crystallised into only a cup of sugar! Then I prepared roasted eggplant, capsicum and quinoa salads and spinach quiches with ricotta from my Jersey milk for meals to re-heat.

THE BALANCING ACT

Ground work is essential in permaculture because the biggest broccoli on the block is a small reward if it's not nutritious. Understanding the natural flow of the land, observing pests and identifying predators is also vital. To live in reality I had to wake up, open my eyes, listen and take notice of anything that required an immediate response. When ideas don't turn out exactly how



A rainbow basket of poultry eggs is something Rachel had always wanted to create.



Vertical growing, a clean water supply, protective fencing and shade sails have been secrets to a healthy and productive garden.



Preserving eggs has always been a challenge in maintaining a continuous supply when poultry take a break from laying – until Rachel heard about pickling them.

I visualise, I don't give up! I just let go of what no longer generates tranquility.

To be content and benefit from a holistic lifestyle is to know of connectedness. Animals are not only good indicators of bad weather on the horizon, they sense hidden fear or any anger brought onto the property and show it by acting out of character. Caring for poultry and livestock is continuous work however the sheep have

successfully eradicated most weeds and having an on-site compost is convenient to feed the plants which feed me.

THE RESULTS ARE IN THE ZUCCHINI

My taste buds appreciated the fresh harvests rather than craving favourites and I gave plants more nurturing since I was relying on them for food. When a crop of zucchini blossoms shrivelled up I quickly researched solutions —



The connection Rachel shares with her animals makes all the hard work worthwhile. Leopold the mini Galloway now lives on at a popular farm stay.



A stockpile of preserves Rachel prepared in advance using produce from the garden she challenged herself to eat from for a month.

concluding pollination issues and calcium deficiency. I set up a hive of native bees near the garden and dug crushed egg shells into the soil, salvaging the remaining zucchini. They were delicious and resisting the temptation to pick them all in one day was not easy!

I survived a month eating out of my garden by using every edible part of plants including leaves, stems, seed pods and flowers. There were ample food staples left to extend however the next succession of seedlings were not quite ready. Some dear friends brought me a picnic lunch at work and homemade

preserves, a few weeks later there was plenty in the garden to return their generosity. Another lovely lady gave me Kombucha drinks in exchange for a few alpaca fleeces and invited me to join her in hosting a community event.

THE REFLECTIONS

This journey has evolved from a desire for a more wholesome existence to a complete inner transformation. I set out to connect with like-minded people and formed true friendship along the way. These friends have encouraged and supported me as they also relate to

principles of sustainability. We discuss common interests and share what we have to spare whether it be knowledge, equipment or an extra pair of helping hands.

Life gets busy so taking a moment of contemplation and a deep breath helps me establish clarity when faced with overwhelming situations. I then remind myself to slow down and decide which tasks are a priority. I often recall one of my dance teacher's mantras: "When you can't remember the fancy steps get back to the basics and keep going".



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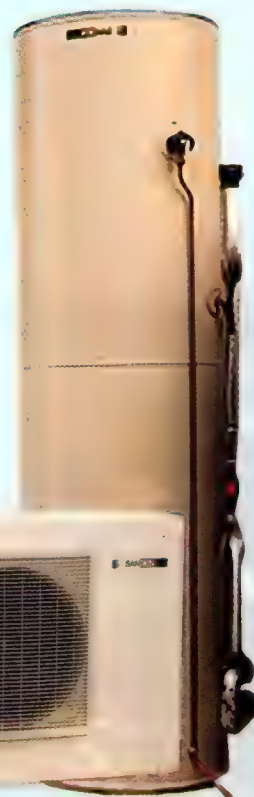
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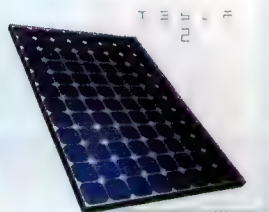
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1300 TO PURE

putting down new roots

Sarah Price moves all the way from north Queensland to a new life and garden in northern NSW. Here she describes the first steps to putting down roots, and building a positive relationship with new soil.



Dry soil asking for compost.

IT'S NEVER easy to think wintery thoughts in early March, which is when I am usually writing my winter EG article. The summer vegies are thriving at this point, unaware that a cool change awaits them that they probably won't like.

This year, my vegie patch is only just getting started though. We've relocated a long way from far north Queensland, all the way to northern New South Wales. Travelling so far to a place you've never been, having never set foot outside of Queensland, has been an interesting experience.

It's been fun, one of discovery and endless new things. And it's been

overwhelming, as you realise how many little, everyday things you don't know when you move to an area you've never been to before. You don't know if this kind of weather is normal (wearing a jacket on Christmas Day?!), you don't know when the rain will start and you don't even know what to plant in the garden.

Arriving at a house that has four raised garden beds ready to be planted, after spending two months on the road is a small comfort. When there are boxes and boxes of your belongings spread across the house, there are a lot of comforts to be found in planting something.

It's grounding, perhaps saying to your subconscious that you're stopping here for a while, it's okay to settle and this is your new home. It makes a place feel more like yours, as you make a decision on what plant will grow in that spot. Amidst the bewilderment of not knowing a single person in a very new place, it's lovely to have seedlings to care for. I feel like as they put down their roots, so will I.

This is a different climate to the one I've spent most of my life in, so I decided to skip the seed sowing process and simply put in seedlings for now. The local wholefoods shop sells locally grown seedlings, and walking past them

Sarah and Rilla survive the Big Move
to northern NSW.



**Bambi eating
fresh cherry
tomatoes.**

I couldn't help but bring some home. Lettuce and mizuna? Home they came and in they went. In followed zucchinis and kale, and after a trip to the local markets the bed suddenly become full with more zucchini, spring onions, silverbeet, comfrey and perpetual spinach.

There are a few challenges at this new house that have changed the way I'm gardening, all for the better, I think. There is no rubbish service here and the entire house is run purely on rainwater, with no option to even add town water later on.

As we've just moved in, we're without chickens and will be for the foreseeable future. When you're without chickens for the first time in ten years, you suddenly realise how much kitchen waste they utilise. I didn't want to throw away food scraps to landfill, and having no rubbish service removes the temptation to be lazy and simply throw it in the bin when you're in a hurry. So I decided I would compost them, solving the problem of the food scraps and also the problem of the soil being very poor (not a worm in sight!).

I've never composted before, not properly, but simply left it all to the chickens to do. So I got googling and was swamped with an overwhelming and confusing array of how-to compost articles. They all seemed to involve various complicated setups, and then I stumbled across one method that suited my temporarily time-poor self (why does moving into a house eat so much time?!). It's called

**A newly-
planted bed
ready to burst
into action.**





Sarah's new home came with four raised beds all ready for action.

the dig-and-drop method, and it's been working well for me.

At the end of each day I head out to the vegie bed, dig a hole and throw the food scraps into it. I chop any larger bits up with the shovel before filling in the hole, and covering it over with lawn mower clippings.

Within a matter of just two weeks, there was a noticeable difference in the soil. I dug a shallow hole deep enough to plant a seedling, knowing I'd planted the compost deeper, and was pleasantly surprised to spot a fat earthworm and also find the soil to be moist underneath, whilst in the other beds it was as dry as dust.

I filled the bed with seedlings, and needless to say, it's the bed that's thriving. All of the plants are lush and happy, and they survive the hot days

without wilting, requiring less water, too. In the other bed that's without my make-shift compost, I've got a few slow growing lettuce seedlings, and a whole punnet of kale died after a few hot days.

There are downsides to lazy composting, it turns out. I've got a big patch of pumpkin seedling volunteers in one spot, where I recall not digging as deep a hole. I don't mind though, I'll pull most of them out and might leave one to grow.

One day I might become a proper composter, but for now, I'm happy that in this new place I've got a thriving vegie patch. It really makes the place feel like home.

Moist soil after Sarah's dig-and-drop composting method.



"I've never composted before, not properly, but simply left it all to the chickens to do."



Dave, Abbie, Lyra, and Jess — ready to move in to their new community.

CO-HOUSING ON THE EDGE OF TOWN

Jess Prince and her family are about to move five hours south of Perth to live in a brilliant new co-housing village on the edge of Denmark.



A workshop to design the common house kitchen.

OUR family of four – two big and two small – has long been drawn to life on the South Coast of WA, arguably one of the most beautiful spots on the planet. After many camping holidays along this spectacular coastline, and in the towering forests, we asked ourselves – could we actually do this? Could we pull off the big shift? But the thought of exchanging our suburban Perth block for a rural property was daunting – grappling with endless maintenance, potential isolation, and dependent on cars to get anywhere. And then we heard about DecoHousing . . .

Intrigued by an incidental Facebook post, we made contact with founding members Pam Rumble and Paul Llewellyn, who had germinated the seed for an affordable, ecologically sustainable co-housing project in the South Coast town of Denmark.

Years before, in a long distant, pre-kid lifetime, I had wwoof-ed with Pam and Paul, staying in their inspiring

hand-built home, and working on their abundant permaculture property. Unbeknown to me, they had decided their farm, seven km out of Denmark, was too big and too much work for two people. “The principles of co-housing just struck a chord with Paul and I,” says Pam. “It was a second chance to build a really great sustainable house, but mostly it was about people, being with people and sharing labour.”

A VISION FOR COLLABORATIVE HOUSING IN REGIONAL TOWNS

Sustainability . . . community . . . an urban village right in the heart of a regional town . . . South Coast WA . . . everything about this project resonated strongly for us. This was just what we’d been waiting for, and we leapt on board as resident investors. Just a short walk from Denmark’s town centre. DecoHousing has attracted a diverse, intergenerational community of future residents (ranging in age from newly born to 79), drawn by a shared vision

of “an eco-village within a village”, in what is believed to be a first for regional WA.

Collaborative housing is not new. Indeed, co-housing has become a successful model for neighbourhood development in many large towns and cities around the world, drawing on common principles of affordable and sustainable housing. Construction of the 12 strata dwellings, common house and shared facilities is being primarily funded by resident shareholder investment, with additional financing from Social Enterprise Finance Australia.

Having shares in our own development company cuts out a substantial developer profit margin, and ensures that homes are designed, built and managed by residents, with the assistance of professional architects, planners, builders and other specialists.

PURPOSEFUL DESIGN

DecoHousing aims to bring about strong community through purposeful

"We were drawn to a vision of vibrant community growing alongside flourishing productive gardens, and shared meals and gatherings in a well-resourced common house."

design, building homes with a light footprint for a range of ages and family groupings. Designed by H+H Architects, the homes are small but spacious, light, airy and warm, and carefully grouped to provide acoustic, visual and spatial privacy for all. By sensitively linking private homes and small private courtyard gardens to common spaces and facilities, spontaneous social cohesion is integral to the design, not unlike living in a vibrant, friendly street or neighbourhood.

Common resources include gardens and orchards, a large workshop shed and a common-house with kitchen, guest accommodation, library and indoor-outdoor dining space for shared meals and events.

We were drawn to a vision of vibrant community growing alongside flourishing productive gardens, and shared meals and gatherings in a well-resourced common house. I've often heard the expression: "It takes a village to raise a child." Divided by fences in the 'burbs, this is not always easy. Nor on a rural property kilometres out of town, for that matter. As parents of two young children, now three and six, we had found our 'village'.



Tamping hempcrete into formwork.



Removing window formwork once the Hempcrete walls have set.

SUSTAINABILITY

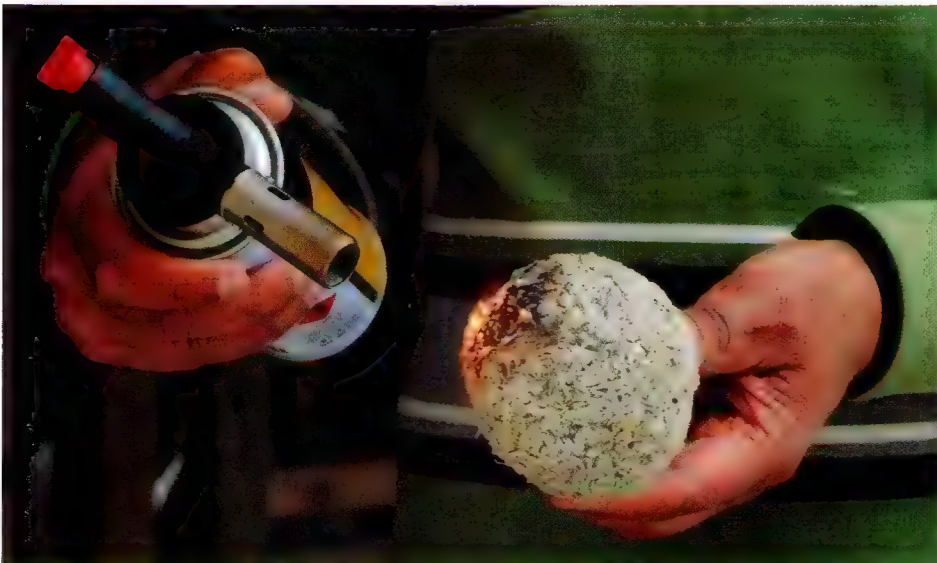
Central to the development is its commitment to sustainability, including dwelling energy ratings between 8.8 and 9.3 stars, common gardens and orchards, rainwater harvesting, a grey water system, vehicle access peripheral to the

housing cluster, comprehensive passive solar design and an integrated solar PV/battery storage system that will supply power for households.

Primarily built from Hempcrete, DecoHousing adds weight to the growing push for this innovative



Newly rendered 2-bed homes.



The fire resistant properties of hempcrete.

material to be widely used in the building industry. Industrial hemp mixed with lime and water binds to form a lightweight masonry product. Spend any time with Paul, and you will soon be converted: "This is a breakthrough building technology, it captures carbon into its structure, it's easy to use, it doesn't burn . . . it's a highly insulating, breathable

membrane that's perfect for human beings to live in".

Although hempcrete houses have been built in other parts of Australia, the Denmark project is likely the largest and certainly the first of its kind for WA.

LIVING THE DREAM

Over the past two years, we have closely followed the evolution of DecoHousing,

from plans on paper to built reality. From afar, we have been inspired by the impressively diverse skills of the people co-creating this liveable and sustainable community – accountancy, project management, facilitation, research, social media, construction, community liaison, scones baking. And as often as we can, we bundle the kids in the car, and scoot five hours south to connect with our future community, and scope out developments onsite.

With only months until completion, we are looking forward to trading our block in the suburbs, for a thoughtfully designed, socially connected neighbourhood within walking distance of a regional town. And all going well, by the time this goes to print, that's where you'll find us, living the dream on the South Coast!

• As Jess is writing this, all but two homes in the 12-unit strata development have already been purchased. If this sounds like a dream you share, visit <http://decohousingdenmark.wixsite.com> for more information.

Digging deeper into the worm issue . . .



EG's chook whisperer, **Claire Bickle** of Brisbane, examines all the ins and outs of worming your feathered friends.

A COMMON question I get asked is: "How often should I worm my chooks? How do I know if they have worms? Do I need to worm them at all? Can I prevent my chooks from getting worms in the first place?"

If this sounds like a familiar conversation or thoughts that you've had about your chooks and worms, then read on. Believe it or not chickens can quite happily and healthily live on with a certain amount of intestinal worms without showing any ill signs or symptoms.

These worm populations will not multiply and increase within the chicken's body. They increase in number via the number of infective worm eggs and larvae they eat off the ground. The problem arises when chickens are kept on the same ground year after year where worms egg/larvae populations gradually increase.

AND THERE ARE MANY TYPES OF WORMS

Hook worm, eye worm, thorny-headed worm, gapeworm, round worm, large round worm, capillary worm, crop worm, cecal worm, stomach worm, thread worm, tape worms. As you can see there are many types of worms and they affect various locations within a chicken — not just necessarily the gut.

HOW DO YOU KNOW?

Symptoms can vary but a dirty bottom is a telltale sign of intestinal worms. This is where the feathers around the vent — usually soft and fluffy — are soiled with runny faeces; worms can quite often even be seen in the droppings.

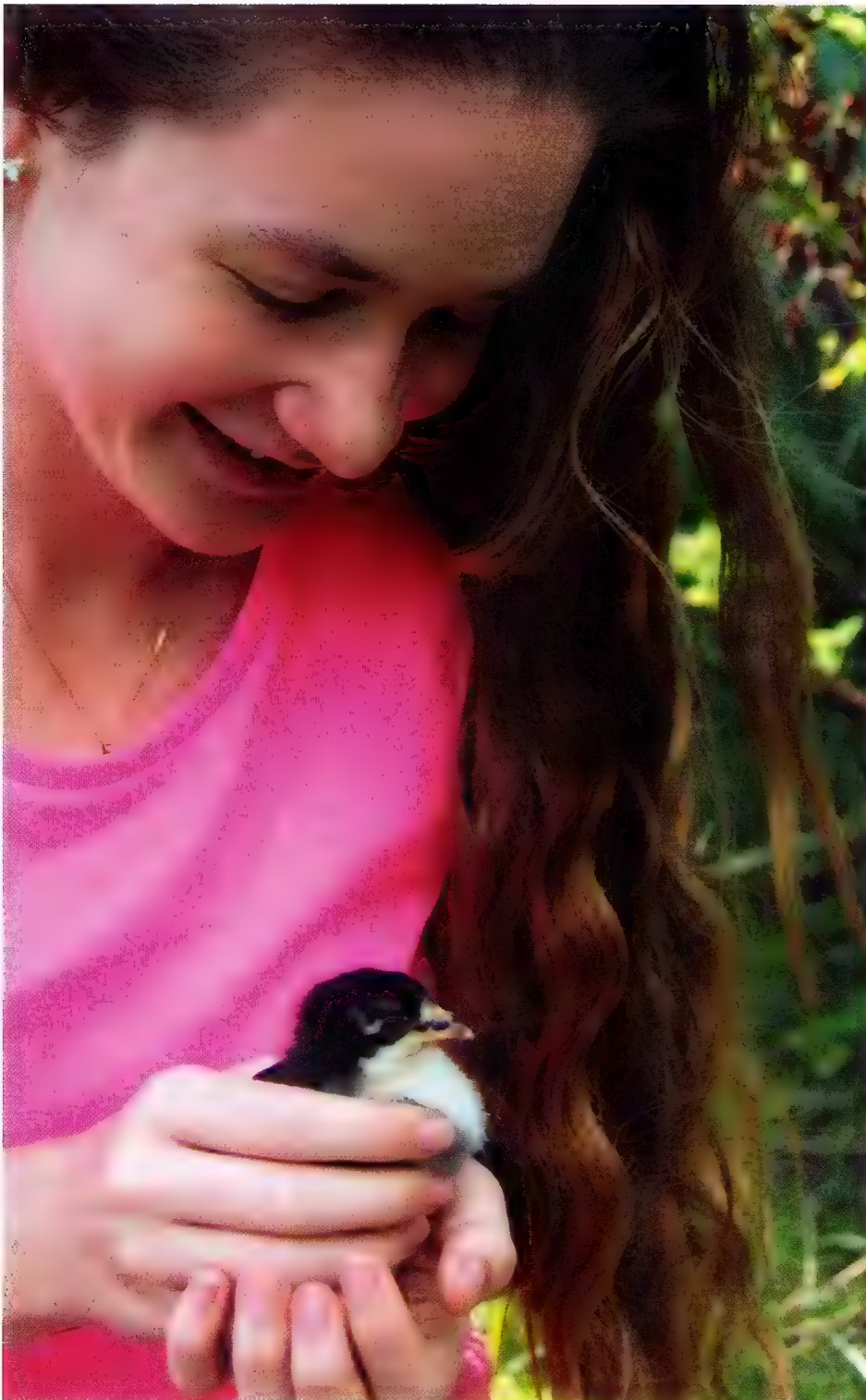
Weight loss is another indicator that worms may be present, due to the fact that the worms interfere with food absorption. Lethargy and listlessness: this is where your chickens

appear to be depressed almost, moving slowly, disinterested in everything around them. And quite often this behaviour results in being bullied by others in the flock.

Worms that invade the respiratory system will eventually cause issues with breathing and if left untreated can often cause death.

HOW OFTEN SHOULD YOU WORM?

There is a lot of debate over this particular question. Prevention is better than cure of course but it can be an impossible task to keep your flock from ever being exposed to worm egg or larval populations and to manage the worm load they may be carrying. As they say good management rather than perpetual medication is key. Continued use of medications — de-wormers — can result in resistance and ineffectiveness of the medication.



Keeping young chickens off old ground (where older poultry have been living) is a good way to stop young birds from possibly consuming any worm eggs or larvae.

WHAT CAN YOU USE?

If you suspect a chicken is suffering from worms you can administer an approved de-wormer. Be aware that there are a lot of off-label drugs frequently recommended and used. These have not

been approved for use with poultry. A vet may prescribe something and this is classed as extra label.

If you are not sure what is and isn't, because the laws can change regarding what is allowable and what isn't, check

Apple cider vinegar can be administered via their water once a month for three to five days at the rate of one teaspoon per litre.

in with your veterinarian. Even approved wormers can cause concern with egg and meat consumption afterwards.

Some wormers with the active constituent Piperazine have a withholding period of 14 days for meat consumption but it has actually not been approved apparently for hens where humans are going to be consuming eggs.

There are another range of wormers that contain the active constituent hygromycin-B and you need to be aware as a consumer that this is an antibiotic. It pays to do your research, be informed and if in doubt contact your local avian vet.

ORGANIC OPTIONS

Adding garlic and raw apple cider vinegar to your chickens' diet will act as a preventative but not a cure. Garlic can be administered via their water or chopped and mixed with their feed at feeding time. I usually allocate one clove of garlic per bird. And no it won't make the eggs taste like garlic.

Apple cider vinegar can be



Free ranging is a good way to keep your flock healthy. Claire's Silkie team love cruising around the house garden and because of their size and feathered five toe feet, they don't really cause too much scratching damage. No dirty bottoms here!

administered via their water once a month for three to five days at the rate of one teaspoon per litre. There are some plants that can have a vermifuge effect when fed raw to your chickens, such as: brassicas – broccoli, cauliflower, kale, mustard, cabbage. Nasturtiums, cucurbit seeds and the seeds of pumpkins are also recommended. Cucumber and pumpkin seeds can be given ground up or just cut in half and given to your chickens to peck at.

These natural remedies work by not killing the worms but making the

internal environment less habitable for them and decreasing their capacity to get a foothold.

PREVENTIVE MEASURES AND REMEDIES

Besides the above mentioned vegetables, garlic and apple cider vinegar, managing the pest load in the soil is critical to keeping parasitic worm populations at bay.

They can easily build up in the soil where the manure load is high. This can be done by removing the top layer of soil and adding it to the compost heap.

Another option is to keep your flock in a moveable chicken tractor. This way your chickens will be constantly free ranging on fresh new ground.

If mobile pens are not an option, in fixed pens the way to discourage soil parasite build-ups is to use a deep litter system where you continually ensure good layers of mulch are added to your poultry's yard area on a regular basis.

Don't let your poultry run on wet ground. Worm egg and larvae happily survive in soil that is continually moist.



NEWCASTLE FARMERS' MARKETS

Brydie Piaf from Newcastle wanders among the stallholders and punters at the vibrant Newcastle Farmers' Market one Sunday recently to give us a taste of what's fresh and who's lovely.

CONNECTING with community and seasonal eating — hands down two of my favourite topics. Having a regular local farmers' market here in Newcastle, makes tapping into those things an easy way to start Sunday mornings. While the markets draw over 8,000 people each week with over 140 stalls, it's not hard to see why a set up

like this works so well. Each and every time I go, I bump into lovely people I know, have interesting chats with growers and makers, and am guaranteed coming home with bulging goody bags. Which in turn sets us up for the week to come.

Community connections and seasonal eats is why I love going to the markets, but what's the appeal for others? I

thought I'd chat to a few people and find out.

LACHLAN AND JENNY, INDIGENOUS PLANT SPECIALISTS

Specialising in local native plants, revegetation and contract growing, Jenny and Lachlan have been at the markets every weekend since it first opened.



Guaranteed to come home with bulging goody bags.

"It's such a nice community, got a good atmosphere, lovely people, and a great variety of market stall holders. It suits us, and the type of plants we are selling to have a stall like this. We used to sell from a big shed nursery, and on a weekend there would be no customers. Here though, each year the market just grows and gets stronger. Often there will be regular customers, plenty of new customers and these days many younger people interested in the plants as well."

DIANNE, REGULAR CUSTOMER

As a regular to the farmers' market, Dianne has a handful of stalls that she usually visits, where she can get things done quickly, while getting her week's worth of fruit and vegetables.



Weekly shopping with her mum, and Matilda gets her face painted.



Ivan the flower farmer.

"I'll usually spend about an hour here, but it depends. Today we are taking our time as I'm here with friends, so we're having coffees and just waiting for our gozlemes. Usually I'm in and out, I know what I want and where to get it. Have a handful of favourites I regularly buy from, that's my food for the week, and then I'll go home."

IVAN THE FLOWER FARMER

Local farmer, Ivan, has been selling flowers grown from his Peats Ridge farm at the markets for the past four years. With trade starting from 7am at the markets, his day starts hours earlier to ensure flowers are all packed,

sorted and ready to go. Community connection is a major draw card here, enhanced by opportunities to really get to know returning customers week in and week out.

"People often ask for gardening advice for themselves, for example like kangaroo paw — they might be struggling to grow that, and so they'll ask for some advice. I think that's a really good thing too, so I'm happy to pass on any advice I can give."

Growing flowers, like many farming jobs is weather dependent and very physical. Ivan has been farming for the past five years and has made a few changes over that time to his

Community connection is a major draw card here, enhanced by opportunities to really get to know returning customers week in and week out.



The markets draw over 8,000 people each week with over 140 stalls.

practices, which have been different to his parents' methods (who were also flower farmers.)

"It took a little while for my particular business to get going, I still did okay, but flower farmers are a dying breed in some regards. A lot of flowers are being imported from overseas into flower markets, and I'm one of the few that's gone the other

way, and actually grow it all here. It took a while for people to realise that I was the grower and not just the middle person."

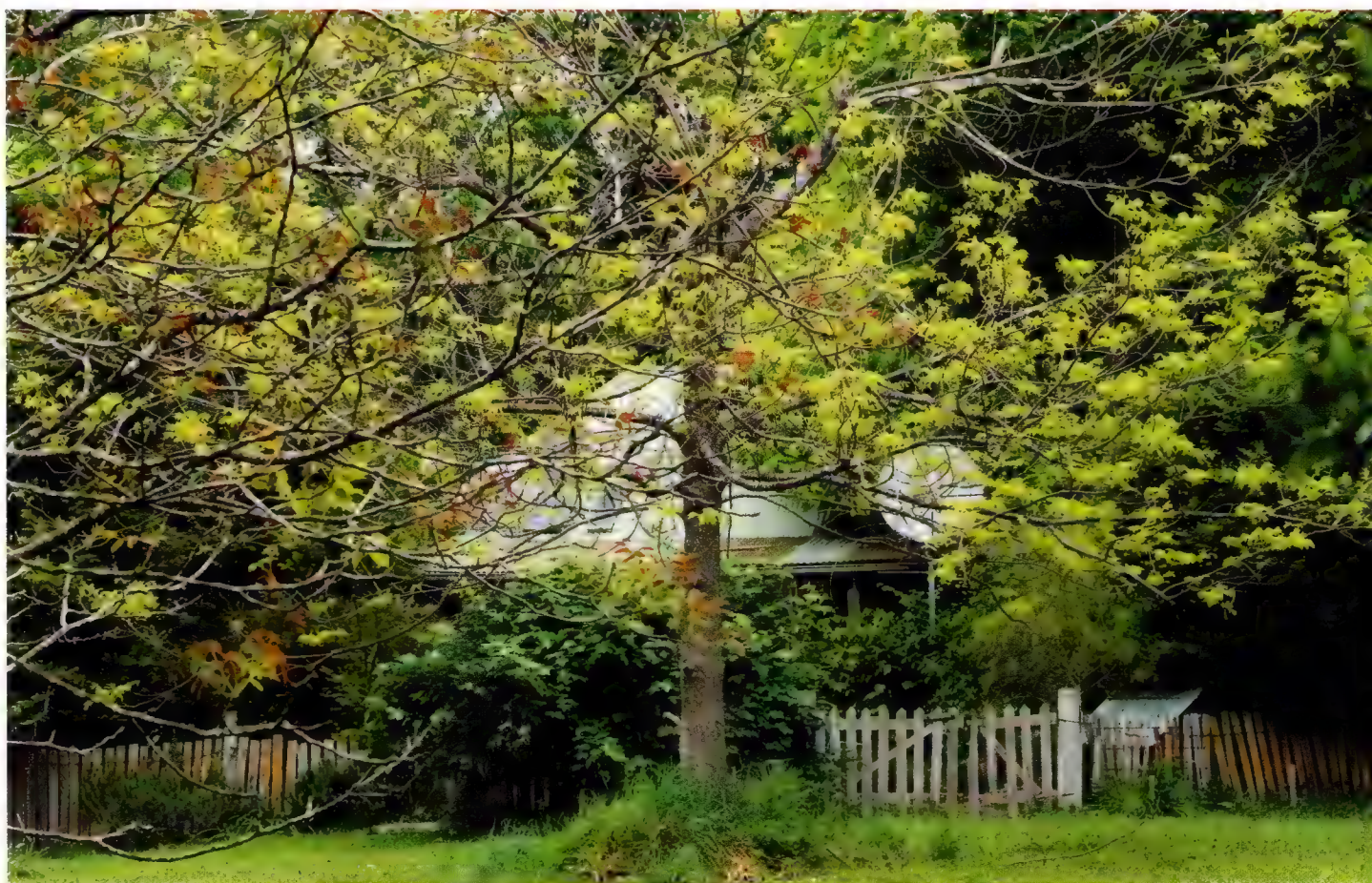
NADENE AND DAVID, FIRST TIMERS

"Great variety, a nice atmosphere, plenty to do, friendly, and good quality produce. It's come highly recommended to us from many people. While Sunday

mornings aren't usually the best for us, I think it's something I'd like to work into our lives. I've got a shopping list, and I can get everything on my list. While it's taken us awhile to get going this morning, I think we'll get to know more of the stalls and be quicker . . . I want it to become part of our normal shop, it's all part of having a community consciousness isn't it."

Trees

AS FIRE-FIGHTERS



Deciduous European trees and short grass provide far better fire protection than thousands of hectares of government-burnt forest (and wildlife) far away.

Preparing for bushfires doesn't mean just raking leaves and keeping the pump fuelled over summer, says **Jill Redwood** of Goongerah deep in the heart of the oldgrowth forests of East Gippsland, Victoria. You can fire-proof your property with a green shield.

“If you can start your tree plantings now, in a few years you should be on your way to creating that green fire shield.”



Green trees save this house from a bushfire.

WE ALL need to think about some serious long-term fire defences. Now is the perfect time to be planning and planting the deciduous trees that could one day save your house. Trees and forests have been unfairly badmouthed and defamed for years, as partners in crime with fire. This hyper fire/tree-fear is a furphy. We've all been subjected to this terror campaign but it's time trees had a say.

I have been through three major bushfires in East Gippsland and as a volunteer firefighter, have been to many other smaller fires. I have also had to sit and listen to government 'experts' tell community meetings that all trees are a threat. Yes, even an apple tree, after which people went and cut down the very things that could save them! In fact the right trees in the right place can provide an effective defence against fire and give your property and assets a far better chance of survival.

Fire resistant trees and non-flammable shrubs can stop radiant heat, intercept ember attack and slow wind speeds.

First, consider which direction the most dangerous fire would come

from. Here in SE Australia, it's the NW where strong hot, dry winds blow down from the inland. East and west can also pose a threat in a change. Fires to the south pose less of a threat as it would be bringing moisture with it from the ocean. Also think slope. Fire races uphill far more quickly than downhill.

If you can start your tree plantings now, in a few years you should be on your way to creating that green fire shield. Thick, leafy deciduous trees are what you need. During the 2009 Victorian fires it was the deciduous trees around three shops in the centre of Marysville which saved them. Locals said the trees cooled the fire down considerably.

If you already have an established garden of trees and mid to lower storey shrubs, give them the flame test. Toss some of the foliage onto a fire and see what happens. If they flare up, consider replacing that plant. If they resist burning consider them a helpful fire-fighter. And if there's a cypress near your house or sheds – mark it as a serious liability!

Fruit trees can be fantastic firebreaks. Mulberries with their lush

canopy, persimmons and citrus are great retardants. Plum trees, feijoas, apples, pears and figs all resist fire. Grapevines along verandas also shield, cool and catch embers. Willows, poplars, oaks, maples, beech, ash, plane trees and many others can withstand serious fire. Consider the space you have, distance needed from the house, footings that could be impacted, their mature height, weediness and so on, then select for your situation. Internet searches will help.

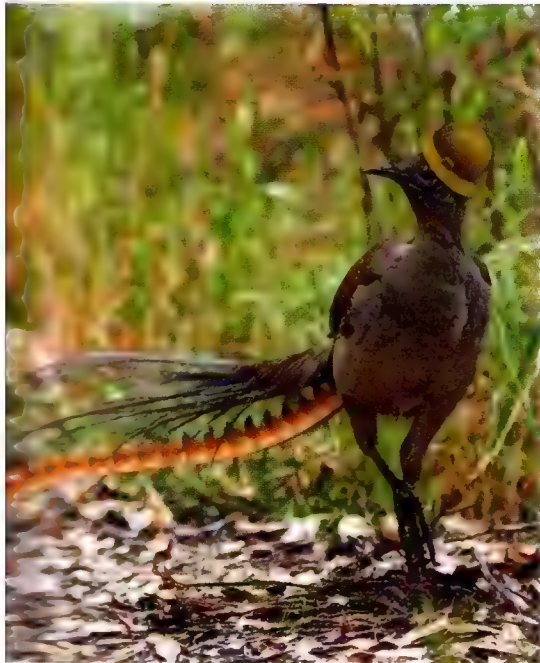
The other benefit of these deciduous defences is that they cool and shade in summer and drop their leaves to let more light and sunshine in over winter.

Natives are usually considered more flammable but that's not always so. Many acacias like black wattle and blackwood resist a flame. There are dozens of native plants that are both fire resistant and fire retardant. Check out the Australian Plant Society's web page.

Even though our eucalypts tend to have oily leaves, the forest as a whole has natural fire-proofing. Intact forests have multiple layers of vegetation which creates a micro climate that



An undisturbed natural forest has its own tried and true 'fuel reduction' system as well as a cooler micro-climate under the canopy that suppresses fires and reduces wind.



Lyrebirds – nature's hardworking firefighters.

traps moist, shaded cooler air. The lower canopy can be closed enough to drastically slow or even stop the wind, and it's the wind which determines the fire severity. An unlogged, ungrazed, unmanaged or un-'cool' burnt forest also retains its hard-working built-in fire-fighters.

These include the digging marsupials like bandicoots and potoroos, scratching and leaf turning birds like Mallee fowl, bassian thrush and lyrebirds. Then there are the leaf and branch munching invertebrates such as moth larvae and termites, and the ever active dead wood consumers like fungi and bacteria. All of these make one extremely active composting army. The resulting humus layer creates a rich

soil that holds moisture. But when the ground layer is constantly burnt it kills off this system, kills the wildlife and their habitat and dries out the ground.

This practice of planned burns as a guise to keep communities safe is now being shown to be counter-productive in many instances, leaving a forest drier, open and more vulnerable to hot penetrating winds and fire.

From government agencies, to media to the chatter at the local shop, this out-dated belief that all trees are flammable and forests need blitz burning is a huge waste of resources and money, not to mention wildlife and ecosystems. Much more targeted work could protect human assets where it matters – within 40 to 60 metres of our homes.

with Jackie French

Touching the Earth

National treasure, Jackie French of Majors Creek in NSW, considers how we don't touch the ground much these days.

WHEN I was eight our favourite mid-summer game was jumping onto the road and feeling the hot bitumen squish between our toes. Our feet were so thick-soled from going barefoot that even bindii eyes couldn't penetrate, nor broken glass unless it was a sharp shard.

My Mum had weird big city ideas: she wanted toilet paper, not sheets of newspaper, even when I pointed out that there was nothing to read on toilet paper. She also expected me to wear shoes. Only one other kid at school wore shoes, and like me, she took hers off as soon as she turned the corner on the way to school.

So much of the fun of each day involved bare feet: jumping into puddles to see how high we could splash the water; making mud lakes in the erosion gullies of the school playground, then watching the clay ooze up between our

toes; the softness of the footpath grass where some dedicated gardener tended it. We'd linger there just to enjoy the feel of it.

The different textures of various carpets; the cool of linoleum — we even made special visits to the lady up the road who had shag pile carpet, just to feel it on our feet. (She made us wash them under the outside tap first).

The soles of the feet are one of the most sensitive parts of the body, after face and hands. But all most of us feel with our feet these days is the inside of shoes, bathroom tiles and bed.

Years ago, on the only formal bush tucker tourist event I've ever attended the good hearted but patronising

young translator began the session by telling our indigenous teacher that: "We must get you some shoes!" Our teacher tactfully didn't reply. I slipped off my shoes a few minutes later, when it wouldn't seem to be a criticism. I still remember the textures under my feet that day, an integral part of what we were being taught: the texture of soil above a deep ant or termite nest changes, as does the soil above many edible roots. It is far easier to subconsciously know the ground is sloping down and there may be a water seep nearby if you are bare foot.

I rarely go barefoot these days: there are dangers of disease that didn't exist — or at least were much less — in my





"So much of the fun of each day involved bare feet," says Jackie.

childhood, and far more dangerous sharp objects too. The less you go barefoot, the softer your feet are, and the more vulnerable. But even today the temperature of the soil under my feet here tells me when it's time to plant tomatoes, capsicum, corn and other frost sensitive plants, as well as when to stop planting lettuce, which may not germinate over 26°C. The air temperature is rarely a good guide: the soil can be warm when there's a cold

wind, or cold when there's a warm one.

But lately I have begun to realise how little contact most people have with soil. Turning walls into vertical gardens is wonderful, especially for kids, but there is no contact with the earth. The movement to turn rooftops into gardens, or even turn whole floors in high rise buildings into parks or hydroponic gardens gives the gift of living with green and growing things. But it doesn't replace the feel of soil

under your feet.

The last two childcare centres I visited had artificial grass. And two inner city schools last year had built over most of their land. Lunching areas and sporting areas were now on rooftops. They were beautiful: bougainvillea growing over pergolas for shade, plenty of dwarf trees, even above ground vegie gardens. But the ground beneath the kids' feet was hard, level concrete, not the patchwork surface of natural ground.



Nothing can replace the
feel of soil under your feet.

Feeling the uneven earth beneath our feet may have health benefits: we walk and run differently in shoes. Fitting foot to ground helps with balance and general muscle development. It may also help general wellbeing, though that is hard to measure, as just being in the natural world lowers stress and elevates mood and immune systems.

The barefoot life I had as a child is not possible for most kids now. But I am glad my grandchildren have the opportunity to feel the texture of rock under their feet in the creek here, and the grass and tussocks outside, as well as learning to grip with their toes as they climb a tree. This is — or should be — part of the heritage of every child.

Humans evolved with the feel of the earth below us. I am beginning to wonder how much we have lost now so much of our lives must be spent with our feet sequestered from the soil: not just forests and species, but the heartbeat of our planet as our feet move across the earth.



The feel of bare feet on a remote desert sand dune is special.

HEMPCRETE

TICKS ALL THE BUILDING BOXES



Deborah Varney with
an unrendered wall
and light switch.

EG's permaculture writer, **Bruce Hedge** of Newham in Victoria looks at the intriguing building material that combines the ideas of strawbale, concrete, and hemp.

SO YOU want to build a sustainable house. You probably have a really good idea of design principles, but what material is best for the walls? Thirty five years ago Alice and I built two mudbrick buildings. We were young and fit, but it was still quite an effort to make 4,000 mudbricks by hand over the summer of '81-'82, even with occasional help from interested friends. If we were starting again today, we wouldn't use mudbrick.

Choice of wall material will be

different in different climates. Here in Central Victoria, a wall with great insulation properties, good thermal lag properties, together with plenty of thermal mass inside the house is a perfect combination to even out the hot summer days, followed by much cooler nights. In winter, a well insulated wall keeps the heat in. We are now spoiled for wall materials which were either unknown or not proven back in the 1980s. At the recent Sustainable Living Fair in Melbourne, I was introduced to

a medium for making walls I'd not come across before. A medium which seemed to tick all the boxes for sustainable houses. And, best of all in today's world, it is actually carbon negative. A material which absorbs CO₂ from the atmosphere during growth, and then continues to absorb CO₂ as the house ages. It's fire proof, rodent proof, can be shaped into any form, can be made rustic or modern, has fantastic insulation properties, is not too heavy, and you can do-it-yourself. And inside houses made of this

substance, it is wonderfully quiet. What is this incredible stuff???

Hempcrete. A combination of the stalks from industrial hemp plants, and a lime and water binding mix, poured and rammed lightly into form work within timber stud walls.

Joe D'Alo and Deborah Varney are passionate advocates of this fascinating material, and hold regular workshops at their place in Kyneton, Victoria. Joe, a builder, saw a magazine article about using hemp in French buildings being retrofitted. Initially importing the raw material, he now sources industrial hemp from a grower in New South Wales, and has great hopes for a new industry in Australia.

"It grows strong and fast in a variety of climates, locking up carbon dioxide, and will probably respond to climate change better than many other plants," he said. "Hemp can even grow in contaminated soils," he added.

After building the timber stud frame, formwork is set to infill the wall, and a mixture of hemp 'chips' and a lime/water mix is poured in, tamped gently, and left to set for a few days, depending on temperature. The thickness of the wall can vary, but 25 to 30 cm is proving excellent in southern Australian climates. The process is not unlike rammed earth construction, but the material is much lighter, and has far better insulation properties.

"The wonderful aspect of hempcrete is that it's made on site and can be learnt in a day," Joe enthused. As the wall cures, the binding material slowly turns back to limestone, absorbing carbon dioxide, and gets stronger, while remaining totally fireproof.

Joe and Deborah have almost completed a demonstration building behind their cute little miner's cottage in Kyneton and plan to turn it into a B & B. From the outside, it is no different in appearance from a conventional building. However, the energy use for heating and cooling is much less, due to the passive solar design, double glazing and heavy insulation provided by the



Two kinds of raw hemp: the coarser Australian material is on the left.



A rendered wall showing its thickness.



The almost completed house out the back.

thick walls. Walls can be finished with render, or other more conventional materials, to make the hempcrete medium more acceptable to the general building industry.

"It does cost about 20 per cent more than brick veneer construction," Joe reports, "but if you do it yourself, it works out much cheaper and vastly better for the environment". He also says that hempcrete is better than, say, strawbale, in a place where the risk of walls getting wet is greater.

Joe has built an ingenious mixer on a trailer which he hires out to make the work easier. At his workshops, it doesn't take long to get the feel of the right mix ratio. One day, hopefully soon, we will realise that hemp is an amazing plant.

• Joe and Deborah can be contacted through their website <https://www.thehempbuildingcompany.com.au/>.

WALKING.

Our garden chef, **Gary Thomas** of Daylesford, Victoria, contemplates the journey, not just the destination.

Photographs by Pete Swan Photography:
peteswanphotos@gmail.com

A POET I know, a sartorial fellow, has told me that he feels I don't really wear clothes, rather, that he observes my apparel desperately trying to hang on to my body, clinging to the moving parts, as I rush about the place. This would explain how my things become so threadbare so quickly.

For me walking has always been something to do with great purpose. Massive long strides of my quick-twitch hamstring muscles, heart and lungs tested, maximum velocity certain. Eating up kilometre after kilometre in pursuit of some end point, head scanning from side to side, waving, thinking, laughing with the joy of life itself. Stop and die might be the impulse here.

Many times I walk towards a glorious sunrise and past it at such speed that all I can do is turn my head and watch it in reverse as I keep rushing forward.

And a walk with a friend, you know, for a

Gary smiling through
what feels like the coldest
wind on earth today.





Winter bitter
greens freshly
harvested



Jewelled rice
ingredients ready
to tumble



Gently tumbling the
jewelled rice

A WALK THROUGH THE WINTER GARDEN

Ingredients: brown rice, carrots, shallot, winter greens, tempeh, lemon, coconut, olive oil, nuts and seeds, pickles, winter veg, dried and preserved fruits

1. Rinse 2 cups of brown rice in 3 changes of water. Cook using the absorption method with 3 cups water until just a little sticky.
2. Simmer 2 large carrots in a pot with 2 shallots and a cup of water or stock, until tender. Purée together with a handful of winter burnet, juice of 1 lemon and up to half a cup of olive oil and cooking juice. Vitamix or whisk to aerate. Season to taste.
3. De stem and finely shred a bunch of kale leaves. Using fresh or dried coconut threads, toast gently in a dry pan until golden brown all over, adding the kale in the last minute or two. Stir frequently to soften all over. Reserve.
4. Prepare all your ingredients for the jewelled rice. I've used toasted nuts and seeds. Chopped dried prunes. Candied lemon rind. Pickled cauliflower. Winter broccoli. Baked beetroot. Deep fried tempeh cubes.

It's what I had to hand on the day, and that is the standard you can apply here. Simply a mixture of your preserved harvest and the available winter offerings. The important thing is to combine a selection of colours, textures and flavours to make that jewellery box effect.

5. Toss these ingredients very gently with the cooked rice and press firmly into a mould. Too much vigour and the colours will bleed into the rice, losing the effect of it all. Any shape of mould will do, try to make sure the walls are smooth for easy disgorge.
6. Get a large round platter. Place the moulded rice into the centre. Pour, drizzle or spread the carrot velveteen around the perimeter of the plate, spiralling a trail towards the rice mould.
7. Place your other items along the trail. I have used Jocasta chilli jam, the coconut kale, nasturtiums, wilted red sorrel, winter radicchio.

Your pathways are individual and well reasoned, after all.

And my fingers are crossed for a well reasoned walk of my own.



Lifting the
lid off the
jewelled rice.



A walk through the winter garden.

*I want to stop
and watch
the sun go
down without
wondering
where my
torch is.*

catchup conversation, can quickly become me shouting to them over my shoulder behind me as our distance becomes further and further apart, until it becomes completely ridiculous, and I stop dead like a loyal puppy and wait for them to draw level, and we stride together for a few moments, until it starts all over again. Sort of more like a baton relay than a chance to share life's current moments.

But these habits must change. Now my children are no longer at school, I am self-determined, so, surely, my time is more my own? And I want

to learn how to walk easier. I want to learn how to walk without purpose, how to walk without destination.

I want to express my movements based on momentary impulse, and the observed landscape. I want to stop and watch the sun go down without wondering where my torch is. I want to smell a nice smell and follow it until I find that apple pie cooling on a kitchen window ledge and call out: "Anybody home?" and see what happens next.

I want to walk mindfully through the winter garden.



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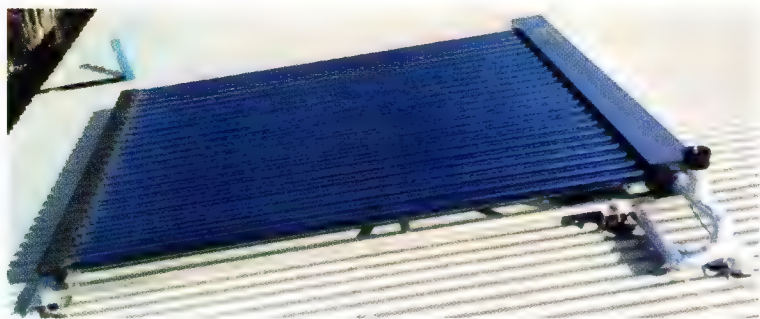
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TINY HOUSES 2GO

a business from the heart



Ric Butler's tiny house
set up as a B&B.

Bob Rich of Healesville in Victoria investigates a fascinating new social enterprise bringing tiny houses into the reach of people living on low incomes.

THOUSE prices and rentals are going through the roof. In the Upper Yarra Valley in Victoria, \$450 per week rent is typical. Even people with a job are often unable to afford that, and the area has many single parents and older people on the pension.

A group of four mates are doing something about it: they have started a business that makes tiny houses, and are actively engaged in finding ways their beautiful productions can be used

for social housing. Check them out at www.tinyhouse2go.com.au. I had a long chat with Ric Butler, who is a retired businessman, and volunteers much of his time to the project. He has a long history of working with troubled youth in the area, and has also been instrumental in establishing the very new Australian Tiny House Association: australiantinyhouseassociation.org.au.

A tiny house is not a house with a small floor area, but legally a caravan.

It is registered under Road Traffic Authority rules, and needs no building permit unless it's fixed with stumps in the ground.

Another team member, Stephan, ensures their tiny houses are much more than a caravan, and better to live in. His main business is designing restaurants and the like, and he uses marvellous computer design tools to enable a buyer to have a 3D experience of design options. The team have now firmed



A new tiny house being clad.



The exterior of a new tiny house under construction. Photo by Matthew Cairns.

up on five basic designs, but even then, individual variations will be possible.

The other two team members are Tom, a builder, and Nick, a cabinet maker, with their own businesses. On the tiny house project, their main role is to teach and supervise young people: for many of whom this is their first-ever paid job. The youngsters gain skills, motivation, a feeling of self-worth, and often meaning in life.

Materials are environmentally sensitive, such as 'Greenstuff' insulation

(recycled drink bottles, fireproofed to Australian standards), and plantation-grown pine. Some recycled materials are possible, as long as weight is kept within road regulations.

The trailer itself costs \$10,000. The total tiny house is typically about \$60,000, way below the cost of even a granny flat. Making one takes two to three months, depending on the buyer's design choices.

Given the small air space, heating/cooling is easy and cheap. While the

A young couple popped letters into ten farmers' post boxes, offering \$50 weekly rent for being allowed to set it up on their land.

team is in Wesburn in the Upper Yarra Valley, Victoria, their tiny houses can go anywhere in Australia.

At this stage, there are all too few suppliers building tiny houses who do a competent job. Ric says you need to look out for shoddy workmanship, since there is no legal requirement for a building inspection. The Association is working to have a quality certification scheme established in Australia, modelled on one in America.

Using his mobile phone, Ric was

The tinyhouse2go team likes to teach and supervise young people — many of whom haven't had proper jobs before.



actually able to carry out an American inspection, and the tiny house passed with ease. Given housing costs and shortages, many local councils are supportive and sympathetic. There is work being done to get others onboard.

WHO ARE TYPICAL BUYERS?

A single mum has hers parked in an inner city backyard. When her kids complete their schooling, she intends to move out of her house. A young couple popped letters into ten farmers' post boxes, offering \$50 weekly rent for being allowed to set it up on their land. They got enthusiastic responses from five.

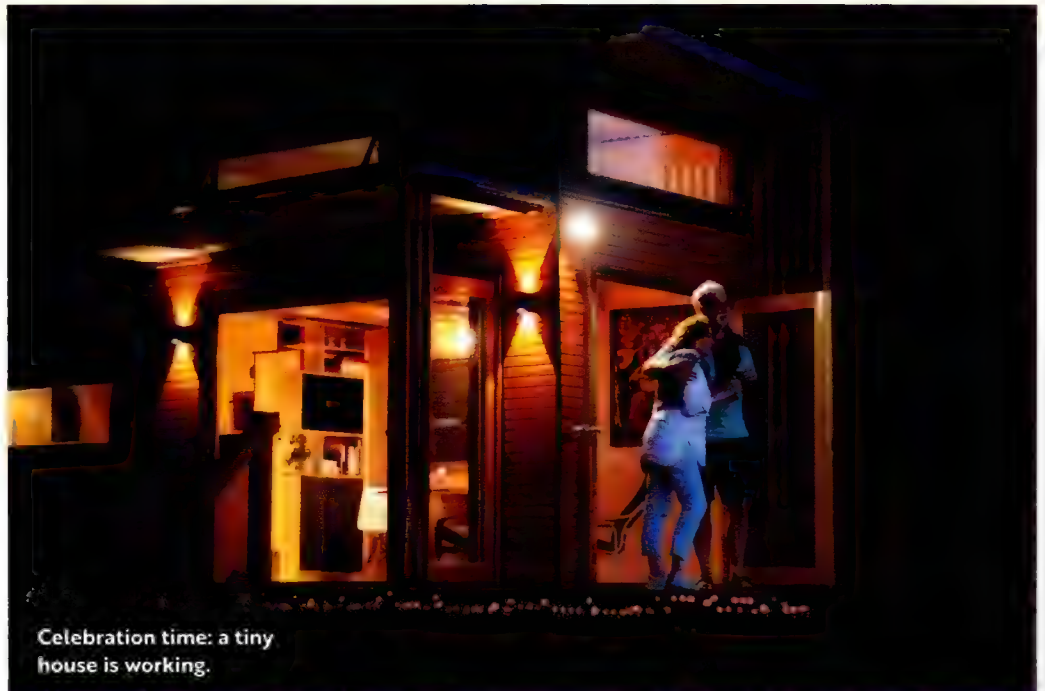
Tiny houses are an increasingly popular addition to B&Bs, wineries and the like. A truffle farm intends to buy several, to allow weekend stays while visitors learn to cook with truffles. A local church is donating land for five units, with a charitable organisation working to raise the money. The tiny houses will be rented to people at risk of homelessness for \$150/week, some of which will go to buying the unit. When it's theirs, they can stay, or take it away. The idea of future ownership should ensure they care for their abode.

A local not-for-profit intends to use them for homeless youth. There are now several similar pilot schemes around Australia, using tiny houses to reduce homelessness.

Ric himself bought the prototype, and has set it up as a B&B, allowing possible buyers to check out living in a tiny house. Details are on the website.

PROBLEMS TO CONSIDER

You need a supply of water and electricity. The one I saw being made will have solar panels and batteries, making it independent of the grid. A



Celebration time: a tiny house is working.

composting toilet is very suitable, but grey water still needs to be disposed of.

In some areas, while elected councillors are sympathetic, administrative staff are less so. This reminds me of attitudes to mudbrick building when I was young, and we got through that. Finance can be an issue, since you can't raise a mortgage. There is a movement to invite investment from self-funded superannuation, with 6 to 7 per cent returns to be expected.

SO, WHY CONSIDER A TINY HOUSE?

If we want to save a future, and a

future worth surviving in, we need to reduce consumption. \$60,000 worth of materials is far better than what now goes into the typical house or unit. Live simply, so you may simply live. For a great many people, tiny houses can be part of the solution.

Also, the tinyhouse2go team's approach can be a model for us all in how to make our local community a better place. Mother Teresa said, "Help one person at a time, and always start with the one nearest you." We can all do locally what Ric and his friends are doing in the Upper Yarra Valley.

RAINMASTER TREE GUARD

One of the greatest assets we have in Australia is the diverse range of trees and bush landscapes in all States and territories. In the modern age the struggle is maintaining and extending these natural assets. To help this cause, Rainmaster tree guards has developed a uniquely designed tree guard for Australian conditions. The guards is designed and manufactured in Australia.

Their uniquely designed vents allow rain water that comes in contact with the outer surface of the guard to be channelled inside the guard allowing the water to go directly to the roots of the tree.

The tree guards are made from Corflute plastic which is fully UV stabilised. They come as a flat pack of 10, 20, or 50 guards per bundle, ready to fold together with no product waste. The guards are available in three colours: green, natural and earth, allowing them to blend into any environment. The guards are 200x200x200x450mm triangular, and are designed to be used with hardwood stakes.

Rainmaster tree guards are completely reusable and can be packed flat and stored for usage at a later time. And they're fully recyclable. The tree guards also have a second set of pre-pressed holes giving you the option to add another stake for extra stability. The addition of this feature, along with their special bowed, V-shaped stake slots means the guard will not twist or tear in high wind environments.

The easy clip tabs allow guards to be removed from well grown trees and packed away so they can be used again if you wish to do another planting. Rainmaster tree guards allow you to do multiple planting projects without having to purchase more guards.

Years of trialling Rainmaster guards in harsh conditions with minimal rainfall have led to the unique design that will make a difference to your survival rates.

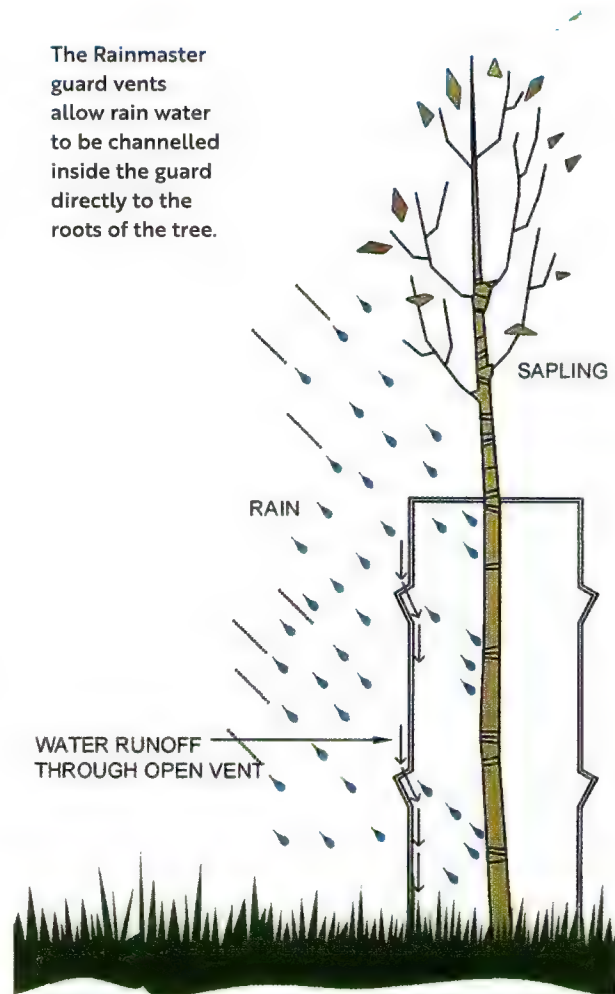
Contact Rainmaster at:

www.rainmastertreeguards.com.au,

email stewartbres@gmail.com,

or phone Stewart Bresnahan on 0409 940 257.

The Rainmaster guard vents allow rain water to be channelled inside the guard directly to the roots of the tree.



The guards can be removed from well grown trees and reused for another planting.

A new ADVENTURE



The top of the block.

EG's esteemed herbalist, **Tanya Jenkyn** of Esperance in WA, is between herb beds at the moment, what with a massive lifestyle change, family upheaval and relocation all taking place inside two months . . .

I MUST apologise for a departure from herbanisation but as I write this article I am between gardens. You see after New Years we received notice that our landlords wanted their house back. It was always on the cards and who could blame them? This is a pretty awesome neck of the woods and it was inevitable that one day they would come home. But that leaves us homeless, with 14 years, ten acres, two adults, two kids, one dog, two cats, three ducks, six

chooks, several fish and over a thousand potted plants to pack up in just a couple of short months.

We panicked, packed, plotted and packed some more. We've rented all our lives and had a vague plan over the years that when the time was up at this location, we'd just buy our own – easy peasy. We didn't want to build or engage in a difficult renovation so Plan A was to find a lovely cheap old character cottage on some beautiful land, established

orchard, tall trees with a bit of virgin bush, close to town with good water (I can hear you laughing now). We didn't mind if it was little run down, we could do a tiny bit of work to bring it up to scratch . . . right? – wrong! Our Plan A dream property didn't exist and we do not have the time on our side to wait for it to turn up.

Enter Plan B. Plan B presented itself in the shape of a block that ticked half of our boxes with the potential to



get the rest ticked with enough time and hard graft. There was a block for sale around the corner from where we'd been living and we do love our neighbourhood. It's only five minutes from town and the drive up to the block takes you down a steep hill with tall trees on either side of the road that arc high overhead so the tips of the trees touch.

The block itself is more than half virgin bush (spider orchid country

woohoo!) including a couple of lovely thickets of majestic old banksias and Munji trees. It is five acres, a perfect rectangle yet undulating with glimpses of Lake Warden – a RAMSAR protected wetland. It has fences, firebreaks, power to the block and a driveway but that's all. No house, no shed, no garden, no orchard, no existing facilities at all but lots of potential. So we bought it! We are officially landowners now.

Next stage of reality check – rules,

regulations and compliance. Like most families, we can't afford to pay rent *and* a mortgage nor can we afford to fast-track a quick dream home build so for the time being, we hoped to build a shed and live onsite while we slowly work on our 'dream build'... *a la* 'Grand Designs'. We started to try and organise the whole shed-house planning-building thing in the hope we could do most of that ourselves. But as a result of a rapid increase in disastrous bushfires in the

“Plan A was to find a lovely cheap old character cottage on some beautiful land, established orchard, tall trees with a bit of virgin bush, close to town with good water (I can hear you laughing now).”



last few years, there has been a dramatic increase in legislation and compliance required for new builds – particularly for urban-rural areas like ours.

The little lifestyle block dream has become heavily regulated it seems. You may not just camp out on a block you own, you may not just live in a shed. You used to be able to have a ‘temporary dwelling’ in a shed but that clause no longer exists.

It seems we’ve missed the boat on the rustic DIY character house we had in mind. To comply and be safe we needed to outsource the nuts and bolts to professionals. Which is cool, I just want to make a garden. I could not give a rats patootie about architectural plans, leech drains and window furnishings — mapping out the eventual tree heights

and their ideal placement into the future is far more exciting.

So we’ve enlisted the help of Anna Morcombe from Dwelling Design to navigate the architectural waters on our behalf. She’s knowledgeable about all the regulations, an excellent draftsman but most importantly, she’s sensitive to our desire to create a beautiful sustainable home to live in that will be able to evolve as we do with the landscape.

There are a few things we’ll miss when we leave our old place – so many tall trees that line the drive and populate the block, a highly productive old quince tree and a fig that is laden late every summer with juicy fruit.

It will take us a long time to grow such magnificent trees but there is much

we take away with us too. Our summer harvest was awesome and the stores are full of rich tomato sauce, baskets full of garlic, pumpkins, spaghetti squash and glass gem corn for popping on the cob. I have collected seed, taken cuttings and potted up pups of all our favourite plants. Every step of our journey here has been stored in the memory bank but the most valuable thing of all we take from here is a wealth of experience in small block management (on one that was less than perfect) so we know what pitfalls to avoid and by starting fresh hopefully we can get it right from the start.

- If you’d like to chat to Anna from Dwelling Design about your dream build you can contact her via www.dwellingdesign.com.au.



Tanya's new land has lovely thickets of majestic old banksias.

dig down FOR BLACK GOLD

Confession time for a victimless crime.
Liz Ingham of Yarraville and Clydesdale in
Victoria spills the beans.

IHAVE a gardening habit that's a bit controversial, but I really can't see why, so the time may have come to talk about it. I've got back to town after the weekend, I've packed six kilos of home grown veg in the fridge, which is proof of concept, I've got a cheeky glass of Yangarra shiraz by my side and the editor is well known to be a ratbag. So let's do this.

I bury kitchen scraps in the garden without composting them first! Gasp! For shame!

I'd always kind of done it on the sly up until about six months ago. You know, nobody was looking, I needed some compost and the scrap bucket was just sitting there.

It was the perfect crime! The worms destroyed the evidence. And here's the thing – they really did. A few months later I'd maybe find a tomato skin and some clean eggshells. Whereas if I'd put the same bucket of scraps in a commercial 'compost bin', on top of last week's scraps and the week before, six months later I'd be forking out a layer of foul smelling gloop.

And I know, I know. I know. We aren't meant to simply toss our vegetable scraps into bins and leave them to ferment. We're meant to cover them in ten parts of carboniferous material that we somehow locate in a suburban setting and fork it over each week, which nobody has ever done, ever.

I tried my best – I had this terrific two-bin system whereby I'd fill a tumbler with shredded paper, which is carbon, add the kitchen scraps every few days and tumble it about, then every so often I'd turf the mix into the Gedge bin to mature.



The first layer of scraps and clippings.



This is the first step to regular succession planting for a continuous home-grown food supply.

Planting the seeds or seedlings into a layer of clean soil on top.



The same spinach seedlings two weeks later.

It really should have worked, but I'd get lazy and stuff up the ratio and it would stink. Methane doesn't have a smell, but it's produced in the same anaerobic conditions that make food scraps go stinky so my shoddy habits were personally responsible for climate change.

But funnily enough, the lightbulb moment came from biosecurity. We make most of our food scraps in town during the week, but we grow our food in the country on weekends. I won't carry my city-backyard compost to the country because I don't want to introduce greeblies to a new environment.

Which ironically has meant that our own country-grown vegetables, composted in town, can't be returned to enrich the soil that grew them. But the fast rate we produce vegetables will

The first layer of scraps and clippings, mixed with soil and aerated.



exhaust the soil unless you give back.

You see where this path is heading? There it is laid out in a linear fashion and I'm going to add the paving stones right now.

Back when I was planning my first vegie patch in 1990, in a share house on the wrong side of the tracks, I bought a copy of *The Backyard Organic Garden** by Keith Smith, who was the former editor of *Earth Garden* and still writes for EG. I was such an enormous nerd that I underlined in pencil all the passages that interested me, which was most of them, because Keith is awesome.

Last night, I pulled out the 28-year-old book and it fell open at Keith's treatise on making compost, which starts with the heading 'A sense of humus'. See? Awesome.

Down the bottom of one page there's a paragraph on 'trench composting', which is a bit like what I do, and below that, 'compost holes': "Another method is to make a series of small compost holes, using a shovel or an auger. Fill with kitchen scraps and cover with soil. When the materials are broken down, plant pumpkins, zucchini or cucumbers on top of the compost hole."¹

My variation is a little different, because it maximises air for aerobic composting and encourages worms by providing habitat. I store the kitchen scraps in a tightly covered bucket until the weekend, then I dig out an area where the soil needs refreshing.

Into the hole I throw a layer of garden clippings, including some rough hollow stalks, and half the bucket of scraps.** Then I throw on some soil and maybe some garden lime or manure and sulphate of potash and mix it about so the scraps are all thoroughly coated in soil and floofed up with air. Then another layer of soil, repeat the mixing / floofing process, cover it with a clean soil layer to hide the evidence and plant straight into the top, if you're ready. The

idea is that the plant roots grow down to the compost layers as the layers break down into plant food, so I change up the ingredients depending on what I'm about to plant.

I do sometimes come back a week later and find some hungry critter has dug a hole and had a meal. But not often, and anyhow critters get into any unprotected compost system.

In-ground composting won't destroy any seeds or pathogens, so you will get a volunteer crop of whatever you threw in, which you'll need to be hard-hearted about, but on the plus side, it needs no infrastructure and has the advantage of making you prepare a growing area every

week. This is the first step to regular succession planting for a continuous home-grown food supply.

* *The backyard organic garden: How to grow vegetables using ecological methods*, by Keith Smith. Lothian Australian Garden Series, 1990.

** And by 'scraps' I do mean everything from cake to cucumbers, but I don't mean meat because that's disgusting. Sure, burying it is probably more respectful than eating it, but ewww. Also, you don't want to bury any fruit that has been attacked by moths or fruit fly, in the soil or in any ordinary backyard compost.

Claire Bickle of Brisbane, EG's resident chook whisperer, answers questions from stumped readers.

Q Hi Claire, I was hoping you could help me with my chickens. One hen is being bullied and I'm not sure what to do. She seems to be getting quite stressed and is afraid of them and is losing so many of her feathers. It's mostly around feeding time but can also be any time of the day.
Laurie, Beaudesert Qld

A It can be tricky when the pecking order is becoming a problem for a particular hen. You may need to investigate to see if there may be a particular reason. Is the hen ill? Is there enough feed and water? Ensure that there is adequate protein in their diet, seeing as the bullying occurs mainly around feeding time.

Sometimes a dividing fence or a smaller pen within the main pen can be an option. This is so the other chickens can see her but cannot actually physically bully her. Eventually you can try and reintroduce her to the main flock but monitor that.

If you choose not to separate her, make sure there is more than one



Bullied hens will be too stressed to lay eggs.



No, it's not the Australian banking industry self-regulating. It's just a fox in charge of the hen house.

drinker and more than one feeder in the pen, so that her health doesn't decline from inadequate nutrition and lack of water.

Q I was wondering if you have any advice for protecting my girls from foxes. The pen is completely fox-proof but they like to free range throughout the day. Last week a fox came one afternoon and took three of my neighbour's chooks! How do I keep them out of my yard. I live on two acres.

Danielle, northern NSW

A The only method I guess for keeping foxes out of the actual greater 'yard' would be to put up some electric fencing if practical. Or at least create a free-range run that is protected by such fencing. Acquiring a Maremma shepherd dog might be another solution.

Q These are our baby Belgian d'Uccles Hershey and Lamington. They absolutely love scratching around outside but as first-time chicken owners

we're not sure how much freedom we should be giving them. They're still inside most of the day with a heat lamp on at night, although I only see them under it occasionally. I think they're about four weeks old now. How long before they can go into the outside coop full time? Also, any guesses on their sex?

Kelly Jones, Arana Hills, Brisbane

A When chicks have the majority of their feathering you can assume that during summer and autumn they will probably no longer require a heat lamp. If the night temperatures are particularly low: below 10°C, maybe pop them back in the brooder with the lamp on then.

Telling the sex of Belgian d'Uccles



Claire says these two Belgian d'Uccles are probably hens.



Investigate: can the broodiness be prevented in the first place?

is fairly easy because by week four to six the roosters already have bright red prominent combs. I'm thinking these two are girls.

Q As a newcomer to having laying hens, I assume that a hen that decides to sit in a nesting box for a couple of days, and stays there, is going broody. Now the question is: how does one knock the 'broodiness' out of her? She has only been laying for two months.
Kevin McCarty, Qld

A Some breeds have a tendency to go broody more so than others and there can be a few other reasons why a hen may go broody. Bullying, eggs not being collected, nesting boxes being too secluded . . . so it pays to do a bit of investigative work to see if the broodiness can be prevented in the first place.

Some tips on 'snapping' a hen out of

being broody. A lot of people have success with relocation to a smaller solitary pen for a period of time – five days or so. Continual removal of the hen and locking her out of the nesting box area may work, but you need to be vigilant. And I've heard that popping an icepack in the offending hen's nesting box can be a deterrent as well. Make sure you collect your eggs daily too.

TOP TIPS FOR WINTER

- As the daylight hours shorten this is a seasonal signal for your chickens that the time to have a break from laying eggs is upon them. Some folks like to put up artificial lighting to keep their chickens laying throughout the winter but I prefer to let them have a rest.
- Just because you're not getting any eggs, it doesn't mean that they are no longer currently a productive pet. Your chickens will still eat insects

(a great source of protein for them), remove weeds, give you manure/fertiliser for the garden and be wonderful backyard companions.

- Dealing with the cold: if you are in a location that receives regular below zero temperatures:
 - ensure your poultry housing has no draughts.
 - that their run allows them to bask in warm winter sun.
 - the litter within the night coop is absorbent; wood shavings are good. This reduces moisture in the air, which is no good on cold winter nights. You want chickens to be warm and dry and that includes dry air.
 - roosts are important in keeping chickens off the floor where cold air will pool. Have them placed at around 50 to 70cm off the floor.

Go with garlic



Illustration by Daisy Gray

Earth Garden's esteemed co-founder, **Keith Smith** of Artarmon in NSW, looks at the history of garlic and how it got a bad reputation . . . from British palates.

"Well loved he garleeck, onyons
and eek [also] lekes."

— Geoffrey Chaucer, *Prologue*,
'The Canterbury Tales', c 1386

Blame Mrs Beeton!

In her famous *Book of Household Management* (1861) she wrote:
"the smell of this plant is generally
considered offensive, and it is the most
acrimonious in its taste of the whole
alliaceous tribe . . . and disagreeable to
the English palate."

Acrimony denotes bitter or stinging,
while *alliaceous* refers to the pungent
smelling *allium* family: onion, garlic, leek,
shallot and chives.

Isabella Beeton's influence was
strong in the Colonies in Victorian

times, so for a long time garlic had
no place in the Australian kitchen.
In the 1950s Elizabeth David (1913-
1992) introduced Mediterranean
recipes that included olive oil,
lemons, fresh herbs and garlic to their
tasteless cuisine. We were lucky in
Australia to have a post-war influx
of southern Europeans who brought
garlic with them.

Garlic (*Allium sativum*) is a
cultivated perennial bulb and spread
throughout the world in ancient
times from the mountains of Central
Asia. It's name comes from the
Anglo-Saxon *gar* (a spear) and *leac* or
lac (a plant). Today garlic is valued
as medicine and is a key ingredient
in fine cooking. Its strong taste and
smell is derived from *allyl*, a sulphur-

rich antiseptic oil that is a natural
antibiotic and anti-bacterial.

For centuries garlic was considered
to be an aphrodisiac and in more
superstitious times to ward off vampires,
witches, devils and evil spirits. More
practically and (more likely) it was said
to cure asthma, head colds and intestinal
troubles, relieve rheumatism, clear the
chest and strengthen the lungs.

The old herbals go on for pages,
listing ailments that garlic will cure,
while my old gardening books mention
it only briefly. "It would be possible,"
wrote Eleanor Sinclair Rhode in
Vegetable Gardening and Cookery
(London 1938), "to fill a volume with
quotations from authorities of all
centuries on the virtues of Garlic."
Being British, she of course, referred to

“The old herbals go on for pages, listing ailments that garlic will cure, while my old gardening books mention it only briefly.”



Mrs Beeton would definitely not have approved of roasted garlic.

“its appalling odour”.

For a change I won't bang on about the Egyptians or the Israelites chewing garlic as they laboured to build the Cheops pyramid at Giza, or Herodotus, Galen, Theophrastus or Dioscorides. Except for Pliny the Elder, who suggested in his *Natural History* (79 AD) that beetroot would take away the lingering aroma of garlic on your breath.

Other writers give parsley, ginger, mint and thyme as an antidote.

The time-honoured advice to rub a clove of garlic around the inside of your salad bowl to enhance the taste, is still good. The strap-like leaves can be cut regularly to add to salads. Sam Orr (Richard Beckett), a journalist and restaurant critic who loved his food, wrote in *The*

Gourmet's Garden (1975):

“Garlic and herb butters provide good, simple dressings for steaks. Combined with parsley and inserted into a leg of lamb, which is then basted with a sweetish sherry as it roasts, garlic stands alone.”

GROWING

Plant garlic from autumn to late winter



in sandy, loose soil in a sunny spot. Plants need a long, warm growing season to mature and won't grow in soggy places.

Garlic will not set fertile seed. Break up a garlic knob from an Australian-grown bulb (preferably organic) and divide it into separate cloves. A bulb might contain 10 to 20 cloves. Push each clove into the earth about 2.5 centimetres deep and 10 to 15 centimetres apart, with the pointy tip up and root end down.

Plants reach about one metre in

height and are ready in six or seven months. Feed with well-rotted manure or compost, but never fresh manure. Water well and hoe to keep down weeds. Harvest in summer when the leaves turn yellow and dry bulbs in the sun. Plait or string up freshly harvested stems and hang them in a dry, frost-proof place.

- Garlic repels aphids and cabbage moths.
- It is beneficial to raspberries and stonefruit and deters curly leaf in peach trees and pests on roses.
- Don't plant garlic near peas and beans.

VARIETIES

'Tasmanian Purple': Has striped skin, big bulbs and sweet taste.

'Italian Late': Softneck, with hot strong flavour. Cloves resemble artichoke scales, so you can pick one at a time.

'Printador': A French heirloom with silver skin, white cloves, strong flavour.

'Dinganski': Purple striped hardneck with a nutty flavour.

"Most dear actors, eat no onions nor garlic, for we are to utter sweet breath."
—'Bottom' in William Shakespeare, *A Midsummer Night's Dream*, c 1594.

making a **SAW-SHARPENING VISE**

Nevin Sweeney of St Clair in NSW describes how to make your own saw clamp to hold any saw in any woodworker's vise so you can sharpen it instead of throwing it away. Perfect.

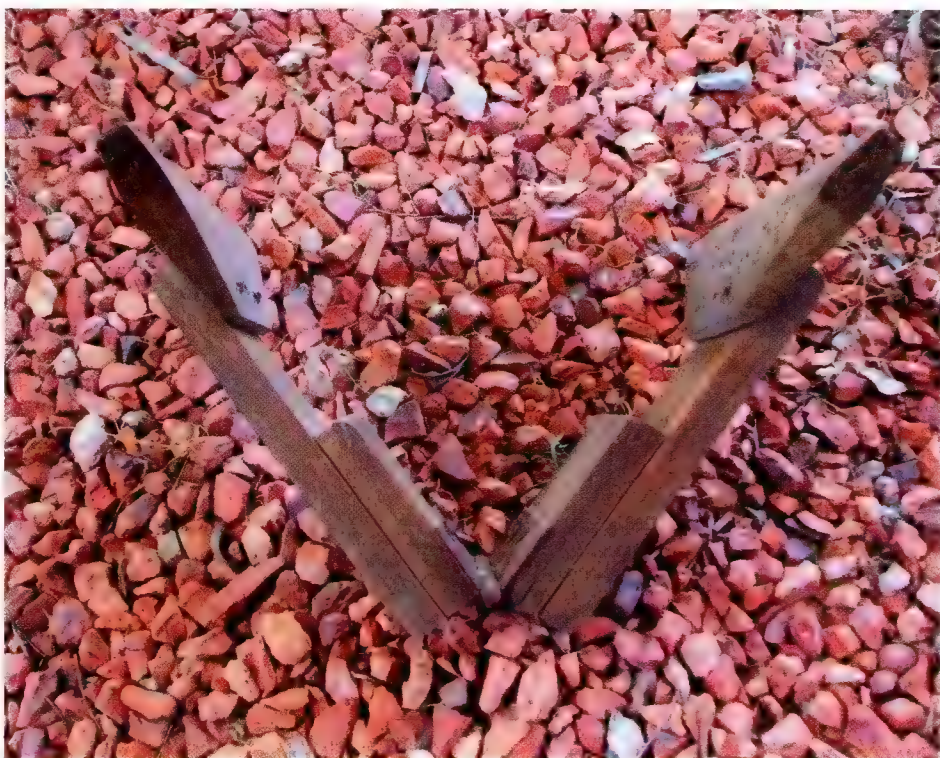
BACK in the day when we sharpened wood saws rather than buying a cheapie and tossing it out when it became blunt, you used to be able to buy a device called a saw clamp to keep your saw steady while you went about sharpening it. Unfortunately I haven't seen one for sale for many years — even secondhand. And I'm not sure that most people would know what it was if they saw it!

However, being able to keep your saws sharp makes your working with wood easier and much more enjoyable as well as extending the life of your saws by many years (thus saving lots of money) so it's a worthwhile skill to learn. Also, having a piece of kit that makes the job easier by keeping the saw held firmly but with the teeth still accessible is a good thing to have too and this article will show you how to make one for the cost of a hinge and some screws.

The timber I used was straight off a hardwood pallet; it's amazing how well they come up after planing the top, rough layer off! To make the saw sharpening vise you will need the following timber:

- a) 2 pieces, 200mm x 93mm x 20mm
- b) 2 pieces, 100mm x 93mm x 20mm
- c) 2 pieces, 280mm x 65mm x 20mm.

Really, the width and thickness can be pretty much whatever you've got so long as the rough shape is the same. These sizes worked for me and are



The jaws of the vise are tapered at each end.

designed around what I got from the pallet. I was able to get all the bits from one of the 1200mm boards from the pallet.

After pulling the board off the pallet and removing the nails, it's simple to plane off the rough outer surface to give a nice finish. I used my faithful jack plane to do the work.

Then use a crosscut saw to cut the board into the various lengths. I then

glued one each of piece b) to the end of each piece a) so that the board was double thickness at one end and single thickness at the other. Using a wood rasp and some fine sandpaper I rounded off the outside ends of the longer board to make it look pretty.

I then took the third set of pieces (c) and cut the long axis down from the standard 93mm wide to 65mm wide. These were to be the jaws of the vise

that would hold the saw steady while it was sharpened and so would need to be cut to shape. They are tapered at each end; I measured off the centre of the board's long axis and then measured in 50mm each side of the centre line and then drew a diagonal line to the opposite corner. Cutting along each of these lines gave me a piece of wood shaped like a long narrow trapezium.

On the long axis or base of the trapezium I measured 30mm down along side and 10mm in along the edge and drew lines along to help me keep straight, then planed away the material inside the line to give a chamfered edge. This was to be the outside surface of the jaws. The inside surface of the jaws I needed to taper from the short side of the trapezium up to the long side of the trapezium such that there was a thin surface of wood to grip the saw blade. So I pared it down with my faithful jack plane. This was a lot easier and more fun to actually do than it sounds when I describe it!

Once this is done the vise can be assembled. I got a large, economy sized hinge and screwed each side to the thickened end of the part a/b assembly using screws that were long enough to go though into both pieces. If you are concerned about the wood splitting, pre drill the holes first with a drill bit small enough to allow the screw threads plenty of bite. I then screwed the jaws to the other end of the assembly. (I tried to describe how I did it detail and realised it made no sense at all, so . . . look at the photos).

To use the vise, put the saw in so that the teeth come up just above the



The saw-sharpening vise will hold your saw nice and steady while you file the teeth sharp.



Put the saw in so that the teeth come up just above the jaws.



With the saw firmly grasped in the new vise, stand at 30° to the saw and run the file through the tooth facing you.

jaws, and then place the whole thing into a wood worker's vise and tighten it up on the saw vise. It will hold your saw nice and steady while you file the teeth sharp.

SHARPENING A SAW

Get hold of a triangular metal file, which you will use to sharpen the saw (they don't seem to sell specialised saw sharpening files any more). The size doesn't seem to matter too much but the smaller it is in section, the easier it will be to handle. With the saw firmly grasped in the new vise, stand at 30° to the saw and run the file through the tooth facing you, the next tooth will be facing away from you so you work your way down the saw blade filing every second tooth.

The basic rule is that you always file away from the back of the tooth that is pointing away from you. At the same time you will be filing off the back of the tooth that points towards you.

Give each tooth a couple of files, lifting the file up so you don't drag it back across the tooth, this will help to maintain the file's sharpness. Keep a permanent marker handy so that you can mark where you get to on the saw if you are interrupted for any reason. Keep this up until all teeth have been sharpened.

SETTING THE SAW

To do this you will need a saw set, which you may have to get from a specialist tool supplier because the hardware shops don't seem to keep them any more. The set is the angle at which



Nev's saw set. You can buy one on www.ebay.com.au (Eclipse or Somax) for around \$20 plus postage.

the teeth on each side of the blade are bent out to, which prevents the saw binding in the cut and being harder to push through (see above).

You will need to know how many teeth per inch your saw has. At least, that is how all my saw sets are calibrated. So lie a ruler along the top of the saw and read off how many tooth points fit within the inch measurement. Armed with that knowledge, turn the anvil on the saw set around until the TPI (tooth per inch) number is lined up on the indicator.

Then it's just a case of lining up the set on each tooth and pressing the grips together so that each tooth is bent out at the correct angle. Once each tooth is sharpened and set, remove the saw from the vise and you're ready to go!

Keep your home

TEMPERATURE STABLE

You can save your reverse-cycle AC unit for when it's really needed if you follow the advice of energy expert, **Matthew Wright**, of Pure-Electric*. Matthew, a former Young Environmentalist for the Year, follows on from last issue's advice on converting your home to miserly all-electric for heating and cooling.

Q KAY so you've made your home into an all electric, power sipping wonder, and anything you heat, you heat with heat pumps (unless you are heating your dinner, that's done with an induction cooker). And your electric appliances are parsimonious with power. But you'd still prefer not to use up too much power heating your home because you know that's where a large percentage of energy is used (40 to 50 per cent in cold climates). The more stable your home temperature, the more comfortable it will be and the easier your reverse cycle AC (which we'll call a heat pump) will have to work, extending its life.

Getting down to brass tacks, how do you keep your home's internal temperature stable? What is actually

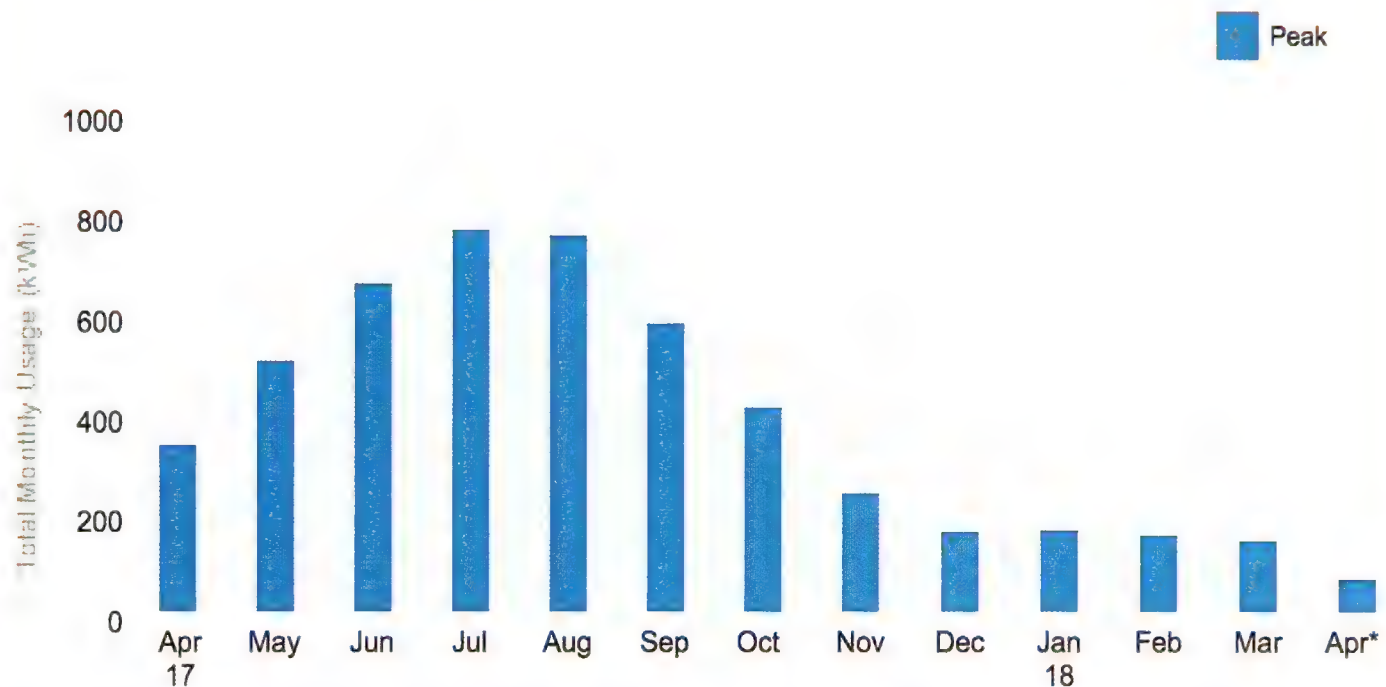
worth your time, money and effort doing? And what will never pay itself back? The following list explores just what you can do and shows you what you can expect from doing it:

- *Draught proofing:* This is a much overlooked and much underrated step. Draught proofing your home is relatively cheap (approximately \$1,000) and yields a annual return on investment (ROI) of around 15 per cent per year. That is, you will save \$150 a year in heating and cooling compared with not doing it, not to mention increasing your home comfort levels. Products are available from a number of vendors including Efficiency Matrix who have the best range.
- *Ceiling insulation:* Insulating your roof is the most effective form

of insulation (hot air rises) and yields a similar return on investment to draft proofing at 15 per cent per year. Despite the propaganda during the media-driven home insulation 'crisis', properly installed insulation is safe and most types are fire retardant. If you combine that with the fact that having LED lights greatly lowers light fitting temperatures (many home fires are caused by halogen down lights) then insulation is safe and an excellent way to take the sting out of summer heat and winter cold (check LED light fittings for how close you can go with insulation and if required consider a fire rated downlight mitt cover for your fittings).

- *Other insulation:* Wall insulation is an option but it does give you significantly lower return (less than 5

Your electricity usage



This real-life bill history from a single pensioner in Ballarat, Victoria with reverse-cycle AC only, for all heating and cooling, demonstrates Matthew's point: heating uses most of the power.

per cent ROI in some cases) as ceiling insulation however if you can afford it, it will certainly boost your energy rating. A better option here might be to use a thermal imaging camera to spot where your house is losing or gaining the most heat. This allows you to target only those bits of the house for insulating that give you the best return, saving you money. Some local environment groups loan out digital cameras or Flir have a camera add-on for an iPhone or android available for around \$300.

- *Segmenting your home into heating zones:* Open plan living has its benefits however one of the major drawbacks is that it requires you to heat and cool a very large space. Houses that have a more room-with-door layout can be much more easily segmented into zones where you heat and where you don't. It is difficult to calculate exactly how much you save via heating zone segmentation and it depends on a large number of factors however it is worth noting that a six star home (in Melbourne) requires

around 32 kWh/m₂ per annum to heat and cool per year (the average Victorian home is around two stars and requires 107 kWh/m₂). Bedrooms do not need to be heated by anything more than an electric blanket (don't buy a cheapy – expect to pay \$200 at least), unless you live in the Arctic. The National Sleep Foundation in the US recommends bedrooms be between 15 °C and 21 °C (21 °C is more suitable for infants). Properly designed (smaller) bathrooms also do not need to be heated (by anything more than a



Draught proofing your home is relatively cheap.

short use heat lamp or wall mounted radiator – if kids can't be trained then a ten minute timer button switch is important for controlling the on/off cycle). Spare rooms, laundries and so on also shouldn't need to be heated and can be thermally isolated from the rest of the house which all cuts down on your heating load.

- *Ceiling fans:* Reversible direction ceiling fans are another excellent way of keeping your home temperature stable. They provide comfortable

airflow in summer and push heat which accumulates near the roof down to where it is needed by people in winter.

- *Windows:* To double glaze or not to double glaze that is the question. The answer to that depends on how much you have to spend. The ROI for double glazing is quite low in temperate regions: you are better off doing it only if you have the cash to spare and you really want to go after the higher hanging fruit. The fact is

that if you have good thick curtains with pelmets (those funny box things at the top of curtains) combined with blinds (especially the air cell variety) and shutters, you get much the same effect as double glazing. Though to put it in perspective double glazing halves your losses through the windows and the pelmet and thick curtain or pull down thermal blinds halves it yet again so you end up with an effective glazed area of just $\frac{1}{4}$ of what you had with no curtains and single glaze.



A warm winter jumper can save you a fortune in heating costs.

- *Other hints and tips:* There is a grab bag of other little measures you can take to save on the need to heat and cool your home. You can add them as befits your situation and include things like: planting deciduous trees in front of windows where you want to block out summer heat but keep winter light. But you can't go past manually operated blinds (and operating them in summer if they are an option for you). Buy low yearly consumption personal heaters for people who feel the cold (you can

get heat mats, bathroom heat lamps, electric blankets even heated toilet seats (make sure they're not always on — if you need them) and indoor warm clothes (Ugg boots, indoor jacket etc).

Ultimately, which home energy saving measures you apply will depend on your situation. In most cases you will be retrofitting an existing home and negotiating any behaviour changes with a household member who hates the hot/cold, so use this menu to pick and choose from.

“What is actually worth your time, money and effort doing? And what will never pay itself back?”

*Matthew runs Pure-Electric, a Melbourne-based consultancy, whose mission is to “reduce your energy to zero and below. That means a serious energy efficiency upgrade combined with solar.”

Visit www.pure-electric.com.au for more details.



The young garlic plants nicely mulched and growing strongly.

the backyard SCIENTIST

How do you know if what you add to your soil helps best, or just makes you feel better? Science can help. **Hermann Paulenz*** is a water scientist based in Central Victoria who describes a fascinating experiment growing garlic to determine good soil additives.

LAST year I was growing garlic at my friend's organic farm in Keilor as part of the farmer incubator pop-up garlic program. In the program groups of four or five people grow a crop of garlic together at several farms around Melbourne and receive guidance throughout the growing season in the form of advice and workshops about growing but also selling and marketing.

Our little group knew that we wanted to add some soil amendments to get a bigger crop. We read many things about all the benefits of soil amendments but we couldn't decide which one was

the right thing for our soil. I thought we had two options: throw everything into the garden beds or try out one at a time to see what worked best and do more of that.

We knew the soil was very poor in organic matter and had been a market garden for a long time, so the minerals might not be ideal either. We grew four different varieties of garlic so for our experiment we only used one variety with different amendments. The two amendments that we wanted to try were biochar and rockdust. Biochar for water retention and organic matter and rockust

for water retention and minerals.

Firstly we grew five metres of control bulbs. These bulbs didn't receive any additional amendments beyond the cow manure that all garlic varieties received in equal amounts. Then we grew five metres of the same variety but with added rockdust. Rockdust and crushed basalt is basically the same thing, although it comes at a very different price. The best rockdust is one with the highest paramagnetism. The rockdust we had available had a very high reading on the Phil Callahan soil meter, so it was good quality. We



Rockdust, biochar, and no additives were the three variations.



Hermann and his team separated the experimental plants into their respective categories.

*"Always remember
— it's equally
important to have
fun with your
experiments."*

used one shovel per square metre. The next five metres had one shovel of biochar added instead of the rockdust. We used biochar that had been soaking in worm-juice for three hours (longer would probably have been better). It is important to soak or 'charge' biochar before application as it could otherwise remove nutrients from the soil.

Fast forward eight months. All garlic plants looked very similar in the three experimental plots. If we hadn't made little signs at the start of each plot, we wouldn't have been able to tell which plot had which amendment. The time for harvest had come! We harvested all garlic and carefully separated the experimental plants into their respective category. We took care to cure them all in the same spot for three weeks before the day of measuring arrived. We trimmed the roots and the foliage all the same for every bulb in the groups and then counted 50 random bulbs out of each group. We thought fifty was a large enough sample size to arrive at a meaningful result.

We only measured the weight of each bulb, but there are other things we could have measured such as the length of the root or foliage, the soil organic matter or even the brix level of the juice as a measure for mineral content.

The results really astounded us. The biochar group performed really well and had median 15 per cent heavier bulb than the control group. The largest bulb we measured also was 20 per cent larger than the largest bulb of the control group (130g). The bulbs that grew in the rockdust bed only had 3 per cent heavier bulbs, which we concluded wasn't significant enough to be counted

as success. It is possible though that rockdust just needs longer to show benefits in weight.

I wasn't convinced about the benefits of biochar before we started but I now think it might be a good amendment for soils poor in organic matter. I was also really surprised how we could get such benefits in the first season! If we added those amendments every year, we surely could get even more impressive results! But the most exciting part for me was doing the actual experimenting according to scientific principles.

DOING IT FOR SCIENCE

So what were the steps to run our experiments up to scientific standard?

1. One step at a time. Science is based on assumptions that are then proven correct or false. Yes, nature is complex and there are interactions at play that we don't understand. But the backyard scientist doesn't need to find out why something works necessarily, it is enough to find out what works and how.

For us it was important to only test one thing at a time because otherwise we couldn't have figured out what the meaning of our result was. If you add a certain amount of compost and biochar for example and you get good results, you don't know if the results come from the biochar or the compost.

2. Good notes. It is very important to take good notes on the conditions of the experiment. We recorded exactly, what we planted, when we planted, what soil type we had, how much organic matter our soil had, how much of what we added etc. The things to note all depend on what we wanted to measure later so others can replicate the experiment. We know that our results are specific for garlic and even for that particular variety in that particular soil. But others can now take our approach and see if it works for them. This is the community part of science.



The results really astounded Hermann.

3. Measuring results. What gets measured, gets managed. If we hadn't measured our results then there would have been no accurate way to find out if our little experiment had any impact at all. You couldn't see if the bulbs were larger in any of the groups. Measuring gave us *information* on which we can now act and improve.

4. Having controls. A control is a way to compare the results to something. If we didn't have controls, we also wouldn't have been able to determine if our experiment had any effect at all. Controls should be treated exactly the same as the subject of the experiment with only one difference and that is the thing you are testing.

5. Meaningful numbers. Because we wanted to get significant results, we needed to run our experiment with a certain number of specimen to rule out *chance*. This is all related to statistics, which I don't want to bore you with, but suffice to say: The more data you have, the better.

Maybe you feel encouraged to try out experimenting yourself. Always remember — it's equally important to have fun with your experiments. Try out something new, share your results, discuss with others. If it's not fun, it's not sustainable.

*<https://joinmefortheride.com/>

now and then

Steven French is an editor and photo journalist from northern Tasmania. With this issue he starts a regular page looking at items, animals, and forgotten crafts around his family farm.

OUR OLD Cherry churn is being retired. It is 108 years old so I expect it has earned a rest. It has served our family faithfully even since my grandfather bought it the year that he got married in 1910. The timber has split, making it leak, and the thread on the handle is slipping. I will repair the old churn and keep it for a backup – may even give it a place of prominence in the kitchen. It deserves to be honoured.

When I decided to look for a replacement churn the first one I came across was identical to the old one and it was less than one hour's drive away. I had been looking for a similar-sized churn for years and had never come across one before. Lo and behold here was one for sale close to home and in as-new condition. Providence is a wonderful thing.

Here are some photos of the churning process and the wonderful butter that the old churn was turning out.



Ready to devour.

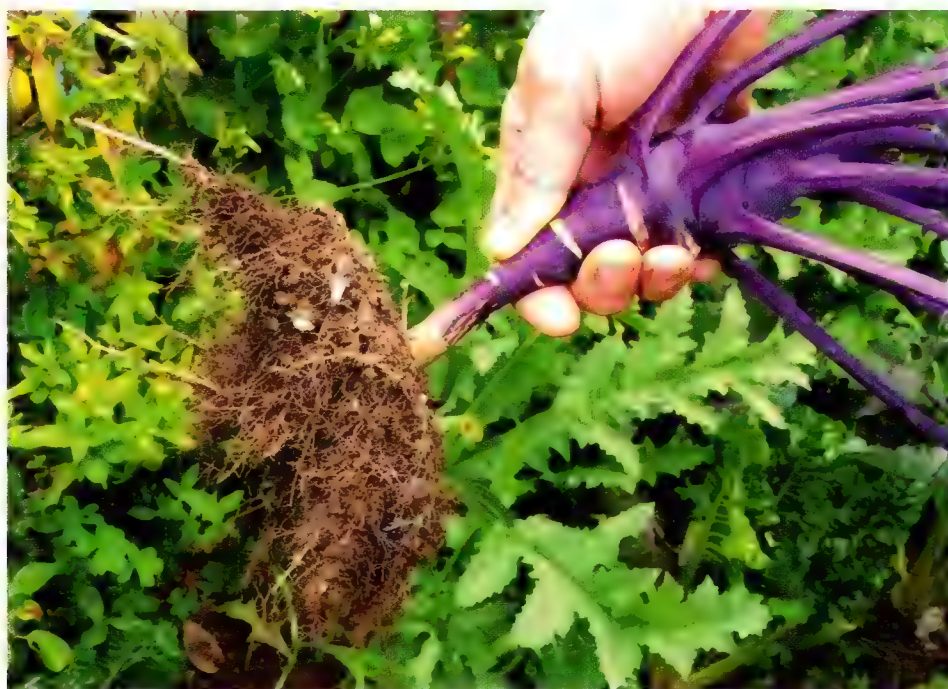


Nearly there . . .



Success.

the cabbage-turnip combo veggie



Each issue, **Wendy Bartlett** of Nairne in South Australia gives us simple tips on the fundamentals of growing common vegetables. This issue it's that bizarre combo, kohlrabi.

KOHL RABI is like a cross between a cabbage and a turnip but its own unique nutty taste makes it stand out on its own. It belongs to the Brassica family like broccoli, cabbage and cauliflower, so it's a biennial plant. It's grown as an annual for its sweet, tender flesh roughly the shape and size of a tennis ball, with its leaves sprouting like thick strands of hair from

this swollen base of the plant. It is sometimes referred to as a turnip-rooted cabbage – foliage of a cabbage and the swelling at the base is similar to that of a turnip.

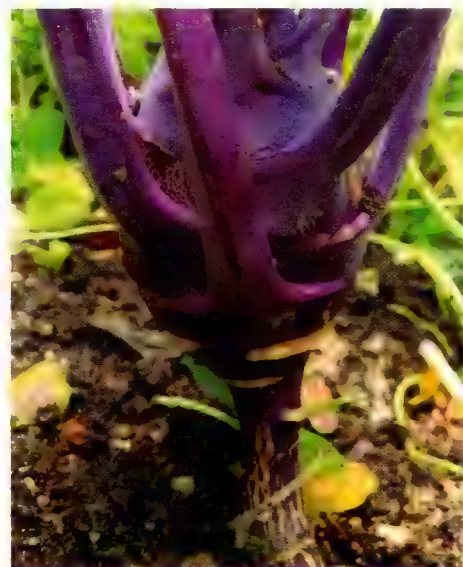
It's a weird looking plant, but worth growing. I love to use the leaves like spinach and either use the root-like base in soups and stews or sliced and eaten raw in salads. It's not a bad ornamental

plant to have in the garden – it certainly demands a second look by all who walk past.

GROWING CONDITIONS

Kohlrabi is a cool season vegetable best grown quickly in rich, deep, well-drained soil and harvested within about eight to twelve weeks, depending on variety. There are early and late season varieties available so there's bound to be one to suit your location. Most reliable crops come from early spring and late summer plantings, but in very cool areas, summer plantings can produce excellent crops. In tropical regions, grow during winter.

It prefers a neutral to slightly alkaline soil so if soil is too acidic, add some dolomite lime or wood ash. Dig



The swollen root developing.



Wendy with a handful of fresh green leaves.

in green manure or plenty of rich compost or animal manure a few weeks before sowing seed.

Be careful when weeding not to disturb surface roots and maintaining soil moisture at all times is vital otherwise the leaves and swollen stem will become fibrous and tough. Controlling weeds while simultaneously conserving moisture is best achieved by a continuous supply of fine, well-decomposed compost or mulch in and around the plants, but be careful not to place mulch too close to stems.

SOWING SEEDS

Transplanting seedlings is not recommended because delicate surface roots can easily be disturbed so sow seeds into soil about 2 cm deep in rows about 40 cm apart, thinning seedlings

when big enough to handle to about 10 cm apart. For a continuous supply throughout the growing season sow seeds successively every two to three weeks.

HARVESTING

Don't be tempted to see how large they can grow because they will become tough, woody and inedible. Pick when the size of a plump mandarin, severing it at the base of the plant with a knife, just above the soil.

PESTS AND DISEASES

Keep an eye out for holes in the leaves as chewing insects love to feast on them. The white cabbage butterfly larvae are always a pest for members of the Brassica family so rub eggs off the undersides of leaves every few days and

"Don't be tempted to see how large they can grow because they will become tough, woody and inedible."

pick off any grubs. Aphids and other chewing insects are also a problem so avoid planting members of the brassica family together — you'll only encourage more insect pests.

If you are not harvesting the leaves, then you won't mind them being chewed a little, but if the insects get out of control, spray foliage with a homemade remedy like molasses spray or a spray using soap, onion, garlic and chilli.

COMPANION PLANTS

Kohl rabi enjoys the company of beetroot, celery, cucumbers, lettuce, potatoes, onions, marjoram, oregano, mint, tansy, sage and thyme, but it dislikes climbing beans and capsicums.

MY FAVOURITE PICKS

I love boiling the swollen stem, peeling it, then chopping it and serving with a little butter, garlic and freshly cracked pepper — it's delicious.

Purple Vienna — bulb and stems purple, but flesh is white and sweet — 55-69 days — Eden Seeds.

White Vienna — white flesh, tender and mild flavour, skin is light green and very smooth — 50-65 days — Eden Seeds.

Did you know? Kohl means 'cabbage' in German and Rabi means 'turnip' in German. Kohl Rabi, rice and lassi (the yoghurt drink) make a comforting and popular meal for the people of Kashmir — the northern most region of the Indian subcontinent.

Edited by Judith Gray

FIBRE ARTS AUSTRALIA — BUILDING CULTURAL FIBRE

www.fibrearts.jigsy.com

For many years, Glenys Mann of Fibre Arts Australia has been hosting Art Camp extravaganzas. Artists from all over the world have come together annually, for five day textile workshops. This is a wonderful opportunity for artists to share skills and a passion for all things fibre. Throughout the workshops, artists offer up 10cm x 10cm pieces of their work for sale. An auction is held on the final evening. This is a huge fundraising effort.

Glenys Mann and her business partner, Nonie Sutcliffe, have recently had the incredible experience of using these funds to establish a permanent water supply for the very poor village of Bhajanya in Zianabad province, in the Indian State of Gujarat.

Glenys explains: "In October 2017 Nonie and I travelled to India into Gujarat, Zianabad province very near the Little Rann Desert. What happened on that trip was to change our lives and the lives of an "untouchable caste" community of Bhajanya. This community of 200 people had no clean drinking water in their village. It was necessary to beg water from other villages and sometimes it would be 24 days before they received any."

Overhearing a heated discussion about failing water storage with their host of Desert Courses Dhanraj Malik, and Jivi, the matriarch of this community, Glenys and Nonie hatched a plan to put the fruits of their fundraising to good use.

To cut a classically convoluted Indian story short, a well was dug and a pumping station installed. Water is now distributed into the community via a pipe under the road that's then connected to a series of six taps that have locks on them. Each family group has keys to one tap; they are responsible



to lock the tap after they have filled their utensils. The taps are low enough so as to make it rather difficult to bathe under. This water is for cooking and drinking only. There is a lake close by that they bathe and wash their clothes in, thus saving the precious ground water for drinking.

The network of textile artists

brought together by Fibre Arts Australia has been extended even further through this amazing project. Just a little reminder of how interconnected we all are. How proud and fortunate I feel to have played my small part in all of this — just by the simple act of making 10 x 10 cm art pieces. To see more visit: www.fibrearts.jigsy.com/.



LIVING THE CHANGE

INSPIRING STORIES FOR A SUSTAINABLE FUTURE

by Happen Films

www.happenfilms.com

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Sometimes it can feel like the environmental, economic and social issues the world is currently facing are too big, too overwhelming, to be dealt with by individuals. Climate change, resource limits, economic downturn, social disconnection. Surely these issues can only be properly managed by our governments?

Living the Change explores solutions to the global crises we face today – solutions any one of us can be part of – through the inspiring stories of people pioneering change in their own lives and in their communities in order to live in a sustainable and regenerative way.

Directors Jordan Osmond and Antoinette Wilson have brought together



stories from their travels around New Zealand, along with interviews with experts able to explain how we come to be where we are today. From forest gardens to composting toilets, community supported agriculture to timebanking, *Living the Change* offers ways we can rethink our approach to how we live. Each and every one of us has the power to create change. Living the Change sets out to inspire us to do just that.

This short film certainly achieves its

goal to inspire action. You can't help but feel motivated to adapt and incorporate lifestyle choices presented here. Watch and learn from the experiences of many dedicated regenerative food growers and passionate community activists.

We know the answers are here and now. This film is beautifully shot, and takes a fresh look at possibilities. What a great resource for the class room and community groups. I recommend this film to all.

JORDIE LANE & THE SLEEPERS

GLASSELLAND

New Music Release

CD \$24

<http://jordielane.com/shop/>

Now here is an album that caught our attention. After seeing Jordie Lane and Clare Reynolds perform at Nannup Music Festival WA, I am hooked. Jordie and Clare are well known on the festival circuit both in Australia and North America, for great flat picking and stand out harmonies.

With a full and dynamic level of production, this collection of songs stays true to Jordie's story telling roots and unmistakeable humour. This album was recorded by Jordie and his partner Clare in Los Angeles in several transitory spaces, and they played every instrument themselves. No mean feat!

Glassellland offers attention to detail and in particular, a depth of songwriting that reflects the diverse musical experience these two have. Great Australian talent, committed to their art.

Edited by Alan Gray

POWERSHOP TOPS 2018 GREEN ELECTRICITY GUIDE

There's a long-standing environment group in Sydney that rates all the electricity retailers in Australia. The Total Environment Centre does a wonderful job helping eco-consumers and wannabe eco-consumers, choose the best power company to switch to. Retailers are ranked from 1 to 5 stars, and users of the Guide can filter results to see the best companies available in their State.

Online electricity retailer Powershop won first place this year, partly because of its innovations on the demand response side. They were followed by 'solar-friendly' retailer Diamond Energy, who ranked first for South Australia and the ACT (where Powershop doesn't operate). Startup retailer EnergyLocals came Number three.

Other noteworthy results were community-owned retailer Enova (who operate only in the Northern Rivers region of NSW but still managed a fourth spot) and retail giant AGL, who were ranked fifth and 'most improved'.

If you're interested in learning how

your own retailer ranked for 2018 (even if you don't have a choice of who sells you electricity – as is the case in Western Australia, the Northern Territory and regional Queensland), or if you are interested in switching to a more environmentally friendly one, check out the guide: www.greenelectricityguide.org.au.

One thing the guide does not cover is pricing. Although some of the top-ranking companies may also offer the best rates (or highest feed-in tariffs), that is not necessarily the case. For most people choosing an electricity

retailer – even those for whom the environmental considerations do factor in – pricing still counts for something.

For people wanting to find the greenest and also the cheapest retailer, cross-check the results of the Green Electricity Guide against results from sites like www.EnergyMadeEasy.gov.au and www.Watsoever.com.au, which allow users to enter their bill information and compare, filter and order plans by other criteria as well.

—Solar Choice



Powershop win the top gong this year from the Total Environment Centre.



The new Aldoga solar farm will be five times larger than this Acciona farm at Lilydale near Emerald, built last year.

CENTRAL QUEENSLAND TO GET \$500M SOLAR FARM

Acciona will build and operate a central Queensland solar farm. More than 1000 hectares of Queensland government land will be converted into one of the biggest solar farms in the southern hemisphere. Renewables firm Acciona Energy will finance, construct and operate the \$500 million project, which is expected to power up to 122,000 households at full capacity.

At the Aldoga site in April, State Development Minister Cameron Dick said the solar farm would provide 240 temporary construction jobs and 10 ongoing positions once complete in 2020. Mr Dick said the project would also deliver a much-needed economic boost to the once-thriving mining region.

"By setting that target of 50 per cent renewable energy production in Queensland by 2030, we can attract this sort of investment," he said.

—Australian Associated Press

AUSTRALIA LEADING GLOBAL ENERGY STORAGE RACE

New research by Greentech Media (GMT) shows that Australia is leading the global race in energy storage, having installed the most storage technology in the world during 2017, ahead of Germany, the United States and Japan. According to GMT's 'Global Energy Storage: 2017 Year in Review and 2018-22 Outlook' Australia installed an astonishing 246 megawatts (MW) of energy storage power capacity, enough to power almost 400,000 homes at one time, while also taking second place for energy capacity (MWh).

"Australia is on an energy storage winning streak and was also recognised as having the biggest household storage market anywhere in the world last year," climate councillor and energy expert Greg Bourne said.

"Our transition to clean, reliable and affordable renewable energy and storage technology is already in full swing, with the nation home to the most powerful lithium ion battery in the world plus a collection of new storage projects in the pipeline."

Bourne, the former President of BP Australasia, said renewables plus storage technology was a winning combination for tackling worsening climate change, while also making economic sense.

"In the past eight years the price of lithium-ion batteries has dropped by 80 per cent and is tipped to halve again by 2025, which is driving investment in this booming industry both here and abroad," he said.

—*Manufacturers' Monthly*

RENEWABLE ENERGY CAN RUN 70 PER CENT OF HOMES

Australia's renewable energy sector is within striking distance of matching national household power consumption, cranking out enough electricity to run 70 per cent of homes last financial year, new figures show. The first Australian Renewable Energy Index, produced by



Getup continues to fund great campaigns, such as the Australian Renewable Energy Index.

Green Energy Markets, finds the sector will generate enough power to run 90 per cent of homes once wind and solar projects under construction in 2016-17 are completed.

The Index, funded by GetUp through supporter donations, underlines the advance of renewables, despite Australia's electricity markets still leaning heavily on carbon-emitting coal and gas-fired generation.

Victoria moves to become the first State to enshrine renewable energy targets in law. Renewables, which made up just 7 per cent of national electricity output a decade ago, accounted for 17.2 per cent last financial year. This jumped to 18.8 per cent last month. This is saving the power sector from carbon pollution equivalent to taking more than half of all cars in Australia off the road, according to Green Energy Markets.

The biggest single source of renewable power remained hydro-electricity (40 per cent), followed by wind (31 per cent) and rooftop solar (18 per cent), the index found. Less than 2 per cent came from large solar farms, suggesting the best is yet to come from this arm of the renewables industry which has an array of large-scale projects underway.

Green Energy Markets analyst Tristan Edis said the emergence of renewables, in particular wind and solar, as a "significant source of power" had

ushered in a "construction jobs and investment boom".

"The renewable energy sector has staged a remarkable recovery, after investment completely dried-up under former prime minister Tony Abbott," Edis said. He said investors had "recovered their confidence under Malcolm Turnbull", with help also from "a range of State government initiatives". Edis said the renewables sector was on track to meet the Federal Government's renewable energy target of 20 per cent of total generation by 2020 over a year early, by the end of 2018. However, the renewable jobs boom underpinned by the RET could "soon turn to bust", he said.

Renewable investment beyond the RET risked collapsing without the Turnbull government moving forward on chief scientist Alan Finkel's recommendation for a future "clean energy target", he said.

At least 46 large-scale energy projects under construction by the end of June were providing enough work to employ 8,868 people full-time for a year. This figure had surged to 10,000 by July. Most jobs were in NSW (3,018), thanks largely to wind farms, while Queensland (2,625) was next, with 70 per cent of its jobs coming from solar farms. Rooftop solar installations supported a further 3,769 full-time jobs across Australia in 2016-17.

—*The Guardian*

EARTH MARKET



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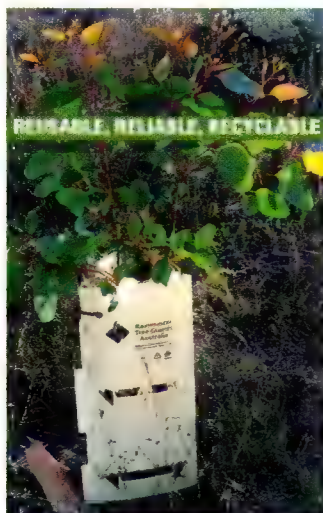
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In late March 2018 EGFA completed its 50th solar lighting project at a six-room village health post at Ghamrang in the Pokhara region. The post services a village population of more than 1,800 people but will now help up to 5,000 people. Villagers are now saved from a bus journey to Pokhara that takes six hours: like driving from Murray Bridge to Melbourne to see the doctor. Our project partner, the Himalayan Light Foundation, supervised a solar technician to install eight 100watt solar panel with 8 solar LED lights and two 150 AH solar battery, one 2KVA Inverter plus the required installation materials throughout the health post. The total project cost was only US\$4,100. All donations to EGFA are tax deductible and not one cent of donated money, or membership fees, has ever been spent on administration or expenses in Australia.

— Alan Gray, Chairman, EGFA Limited.



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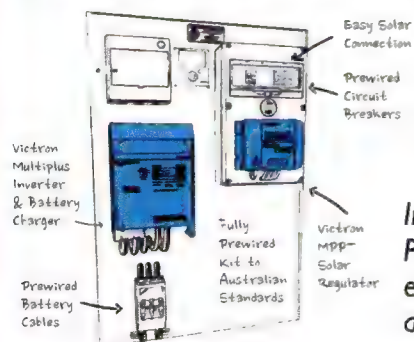
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25 MINUTES TO BYRON BAY. Springcreek Haven is a 65 Acre Multiple Occupancy property, in Eureka NSW. The property is 25 minute drive to Byron Bay, 20 minutes to Mullumbimby, and 30 minutes to Lismore. The property has 3,700 macadamia trees. Macadamia production for 2017 was over \$220,000 and should continue to increase in

QLD



coming years as some younger trees come on line. The property is approved as a Multiple Occupancy (MO) with three Building Entitlements plus two tourist Farm Stay yurts. The property has the potential to be increased with a further five Building Entitlements and converted to a Community Title. Improvements on the property include: fully renovated 1930s 3 bedroom house; 1 bedroom studio; 2 x 66 square metre yurts, each with their own kitchen and bathroom; dairy bales which has two bedrooms, kitchenette and bathroom; tractor shed, storage shed and 3 x concreted and powered machinery sheds; extensive equipment list including harvester, tractors and implements; 30 metre poly tunnel and raised garden beds with irrigation; spring with well and pump, bore with pump and water tanks totalling over 350,000 litres of storage with extensive underground pipes connecting them for flexibility for moving water with gravity and/or pumps; 10.6 KW solar array and battery bank, with large automated generator (the property can be run on either solar or mains power); large wine cellar separate to the house; seedling green house including work bench; 3/4 acre fox-proof poultry area with laying and nesting sheds, rabbit/chicken hutches, and extensive fruit orchards; very fast internet. Price \$2,750,000. Contact Brian Grant on 0408 89 555 or grant_b41@hotmail.com. 📷 📷 📷 📷 📷 📷



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QLD



solar system large with enviro-friendly saltwater Aquion batteries and diesel generator back up. Electricity grid is still available on the property for reconnection if preferred. Abundant fresh rainwater tanks, capacity is 100,000 litres (4 x 25,000 galvanised tanks). Excellent fencing of house block and 2 paddocks, 2 large (matching house) double brick garages (1 used by the builder whilst building the house) and attached 2 car carport. Mature productive mixed citrus grove of 20 trees and over 25 other fruit, avocado and macadamia trees over 3 years old, all organically managed. Raised and other vegetable patches and optional flock of 14 friendly Dorper sheep. This property is also very suitable for 2 co-living couples. Address: 1655 Moorlands Road, Moorland, Qld. Price: \$1,050,000 Contact: Paula – 0405 210 875.



TOOWOOMBA. Rural District - fast growing SE Qld tourist and retirement hub, local airport (Toowoomba west /Welcamp), daily domestic flights direct to Sydney and other cities (growing interstate and international freight hub). Exclusive high ridge lifestyle retreat property on the Northern Toowoomba Scenic Rim. Low impact, sustainable living, all the planning and hard work is done. Elevation 635m ASL = cool evenings), 46 hectares good trees, bush tracks, wildlife retreat. Fantastic views ... know



you are alive! The home is in 2 main modules, passive solar design, includes 5 bed, 2 bath, 2 Living areas, solarium (including approved self contained granny/guest unit), individual lifestyle home with great entertaining areas and large 'chef friendly' kitchen. Solid build 1999, well insulated, slow combustion heaters, abundant wood on property, separate office/guest area with outdoor BBQ facilities and garden WC. Undercover vehicle accommodation for up to 6 vehicles, 2 outdoor rooms, outdoor open fire, automated solar power system, extensive raised veggie gardens, veggie-friendly micro climate to grow lettuce all year round, 36k gallon water storage, large sheds, terraced granite block landscaping. Views across the Lockyer Valley and Scenic Rim to the Border Ranges and beyond, 35 min to Toowoomba, 18 min to Historic Crows Nest, near Ravensbourne National Park, adjacent to the historic Munro Tramway. 2.5 hours to Gold Coast and Sunshine Coast. Thriving local arts culture and tourist routes, many distinct community groups, RSL, CWA, Mens / Seniors / Arts Council / reading / quilters / craft / arts, and social development (maintenance groups). Local restaurants, community groups, book club, yoga, dancing, tennis, sport, markets, Rural Fire Brigade and annual festival activities including the now famous annual Hampton Food Festival. Extensive on site wildlife including koalas, goannas, wallabies, wedge-tailed eagles, black cockatoos, abundant parrots and finches – a nature lover's dream. Google '439 Palmtree Road, Palmtree' for further listing information, including photos, video and plans. Don't miss out, phone our agent and quote 'Eagles Rest'. Phone Dean on 0439 535 232 for further information. 📷📍



MARYVALE VALLEY. 'Millar View', South Branch Road, in Millar Vale Valley between Maryvale and Tregony on west side of range, Queensland postcode 4370. Ideal for small rural business, lifestyle, or hobby farm/weekender. 100 acres with views of main range. Peaceful secluded, former carnation nursery then alpaca



stud. Solar bore, commercial water license, solar grid-connect 3-phase power, plenty of drinking water tanks. 4 bedroom, 2 bathroom, double brick on slab, 5 car spaces, combustion stove, two large equipment sheds, separate garage/workshop with 15 amp power, covered chook run. Offers over \$550,000. Call Tony: 0412 638 406. 📞 📷 📹 📺 📶

SA



BAROSSA - CAMBRAI, SA. Solid brick 4 bedrooms all with full height BI robes. Separate study or 5th bedroom. Main has his and hers walk in dressing robes & an en suite. Spacious lounge & dining. Separate family room and kitchen with plenty of cupboards. 8ft 6" ceilings. Double carport under main roof. Solar panels. Massive shed with mezzanine & office. Suit trade/small business. 3 phase power. In ground 5 person plunge pool in large entertaining area. Horse yard & tack shed. Chook house. Hot house. 36 arable acres. Ample water. 150 -productive, well-established Verdale olive trees, on drippers. Native garden full of native birds. 20 minutes to the great Barossa Valley & 25 minutes to the River Murray. Walk to Post Office, General Store, Mechanic, Library, Land Care Office & Nursery,



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TAS



TASMAN ECOVILLAGE - AMAZING VALUE! On the magnificent Tasman Peninsula, we are an intentional community based on permaculture and cohousing principles, an hour from Hobart Airport. We recently released our first cluster of residential land lots and would love you to join us. Your purchase includes: a freehold strata title to accommodate a house and some personal land, a share in community facilities and 19 acres

LAND Lines

of common ground, all underground services, residential/commercial zoning allowing a home-based business, NBN and pre-approved planning permits for dwellings. Our property is undulating and diverse, with rural and water views and abundant water. Our central village hub has visitors' accommodation and onsite licensed restaurant. We are five minutes' walk from the centre of Nubeena with a school and other services. We look forward to welcoming you! Land lot sizes: 114 m² to 314 m². Price from \$49,000. www.tasmanecovillage.org.au. email: ilan@tasmanecovillage.org.au. For more information phone (03) 6250 2000.



WA

RURAL WILDERNESS, 2178 Lower Chittering 6084. 87 acres of remnant mixed forest. Steel-framed, wood joinery and straw-bale infill house completed in 2000. It is crescent moon shape, solar passive, north facing – double glazed, skillion roof and situated on a ridge that falls abruptly into a remnant forest of power bark, grass trees and a vivid spring flowering understorey (including blue wrens). It overlooks the Brockman River and farmland beyond and has abundant winter rain (possibility for future dam). Off-grid RAPs (2kw and battery system 2011 install), 250,000 litres of water storage (3 tanks), large shed, fire pump system, established permaculture orchard (including cherry tree) and composting loo (including grey water system). The property has been registered with "Land for Wildlife" since 1996 and hosts kangaroos, wallabies, chuditch, and possums. Viewing can be arranged with my agent, LJ Hooker Toodyay 08 9574 2455. <https://www.realestate.com.au/property-house-wa-lower+chittering-126727682>. See the interview by the late Eion Cameron, ABC local radio 'green army program' 2006. <http://www.abc.net.au/local/stories/2007/07/06/1972191.htm>. \$749,000. 



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